

THE POLYCHAETE FAUNA OF THE SOLOMON ISLANDS

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SYNOPSIS

An account of the polychaete fauna of the Solomon Islands (western Pacific Ocean) is given, based on a large collection which was obtained during the Royal Society Expedition in 1965. A total of 220 species are recorded. Two new genera (Family Nereidae), 13 new species and 3 new subspecies are described. The zoogeographical affinities of the fauna are analysed and certain ecological aspects discussed.

INTRODUCTION

As pointed out by Knox (1958), the polychaetes of the Pacific Islands are poorly known and much work remains to be done before a relatively complete biogeographical analysis can be made. Apart from reports on small collections or individual families, comprehensive accounts of the polychaetes from any of the island groups in the tropical west Pacific regions are few. Augener (1927*a*) records 47 species from New Britain and Fauvel (1947) describes about 100 species from New Caledonia. The fauna of the Marshall Islands is comparatively well known with 131 species recorded as a result of the work of Hartman (1954) and, more recently, of Reish (1968).

The Solomon Islands are situated between the latitudes of 5°S and 12°S and between the longitudes of 155°E and 163°E. From the zoogeographical viewpoint these islands are of great interest since they lie between the faunistic centre of the

Indo-west-Pacific region, the Malay Archipelago, and the more distant islands of the Central Pacific. Thus, one of the primary aims of the Expedition organized by the Royal Society of London in 1965 was to determine the biogeographical relationships of these islands with the adjacent regions. As a member of the Marine Party of this Expedition the author spent five months, from July to December, investigating the polychaete fauna and this paper is an account of the ecological and faunistic observations that were made during this period.

I am indebted to the Royal Society, Professor E. J. H. Corner, F.R.S., (Expedition Leader) and Professor J. E. Morton (Leader of the Marine Party) for the opportunity to participate in the Expedition to the Solomon Islands in 1965. For their help in the field I have to thank the members of the Marine Party, particularly Dr. D. R. Stoddart, Captain S. B. Brown and crew of the A. K. *Maroro*, and our native assistants, especially Ini Munamaori. I am also grateful to Wilson Ifunaoa for providing a valuable collection of the 'palolo' rising from Fanalei, Malaita.

For their kind assistance and helpful advice in the identification of various specimens and families, I have to thank Dr. Olga Hartman (two new genera of Nereidae), Dr. Minoru Imajima (Syllidae), Dr. Charlotte Mangum (Maldanidae) and Professor G. P. Wells (*Abarenicola*). Other groups were identified by Dr. P. Bergquist (Porifera), Miss A. Clark (Echinodermata) and Dr. S. J. Edmonds (Sipunculoidea). I am also indebted to Dr. J. D. George for the loan of specimens from the collections of the British Museum (Natural History).

GENERAL ACCOUNT

The Marine Party of the Expedition was based and carried out investigations on Guadalcanal, in the Florida Islands (Nggela Group), Russell Islands and New Georgia Group (for a detailed account of the Expedition, see Corner, 1969). In these areas, collections of polychaetes were obtained from the following localities (see figs 1 and 2): western end of Guadalcanal – Komimbo Bay, Cape Esperance and Naro Bay; north coast of Guadalcanal – Mamara Point, Honiara and Lunga Point; eastern end of Guadalcanal (Marau Sound) – Graham Point, Fintry Point, Maraunibina Island, Pigeon Island, and Lauvie Island; Florida Islands – Kokomtambu Island, Tetel (or Gaskell) Island, Nggela (or Florida) Island and Haroro; Russell Islands (Banika Island) – Yandina, Sifola and Lingatu; New Georgia Group (Marovo Lagoon) – Matiu Island, Pirikale Island, Paleki Island and Batuona (or Wickham) Island. Additional collections were made at Gizo Island (New Manra) and on Malaita – Auki Harbour, Kalota Island, Alite Harbour and at the southern end of Maramasike Passage.

The polychaete fauna of the moderate to very exposed coral reef platforms consists chiefly of coral-boring and crevice-dwelling species. To obtain such species it is necessary to break open the coral rock with hammer and chisel and then carefully extract the worms from their burrows or from crevices using forceps. Those species living amongst the algal cover or chaetopterid tubes are best obtained by dissecting and then washing these materials. Investigations of these habitats were

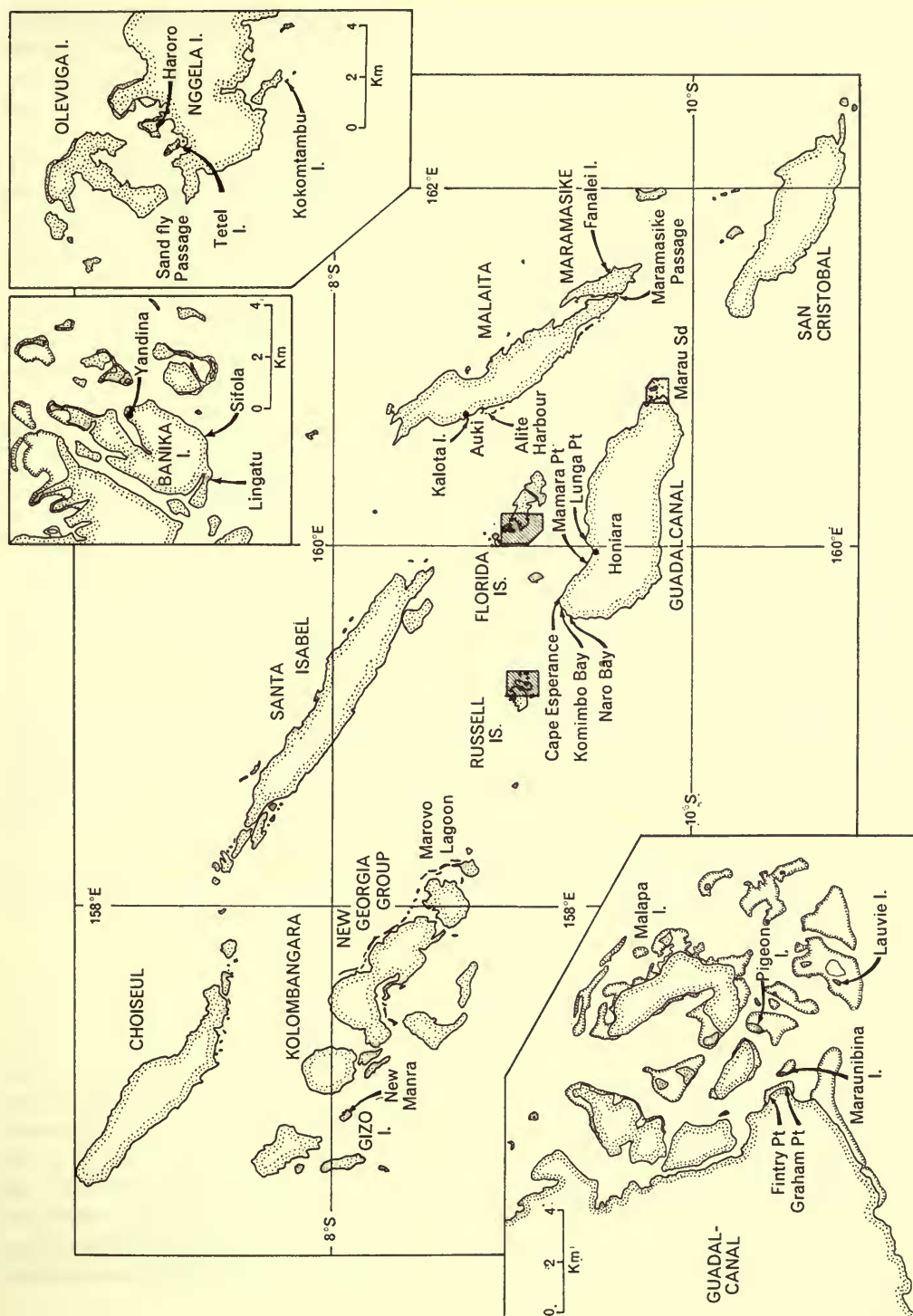


FIG. 1. Map of the Solomon Islands showing collection localities mentioned in the text. Insets - Marau Sound (left) and parts of the Russell Islands and Florida Islands (right).

made at (collection dates in brackets) Mamara Pt. (24.viii), Sifola (2.ix), Lingatu (19.x), Matiu and Paleki Is. (3-7.vii and 27-31.viii), Batuona I. (3.ix) and at New Manra (4-5.ix). Further collections were made at Kokomtambu I. (2.vii) and at Maramasike Pg. (26.xi). Beachrock fauna was investigated at Lauvie I. (18.ix and 4.x).

On the more sheltered shorelines a wide range of sedimentary deposits was studied. The larger species of the infauna were obtained by digging and the smaller species by sieving samples of the deposit through 0.5, 1.0 or 2.0 mm mesh, the mesh size depending on the grade of the sediment. Investigations of the infauna inhabiting a variety of deposits, ranging from thick mud to shell gravel and coral debris, were carried out at Tetel I., Haroro and Nggela I. (5-10.vii and 24-29.vii), Komimbo Bay, Cape Esperance and Naro Bay (18-20.vii and 16-21.viii), Graham Pt., Fintry Pt. and Maraunibina I. (17.ix-10.x). Small collections were also made at Yandina (18.x) and Honiara (28.xi).

In addition to the above studies, further species were obtained from a brackish water lagoon at Lunga Point near the mouth of the Lunga River (9.ix-11.ix) and from encrusting organisms, particularly sponges, on wharf piles at Yandina (19-20.x and 5.xi). At a number of the localities mentioned above and including Auki Hr. and Kalota I. (20-22.xi) commensal polychaetes were discovered. It was not possible for the author to be present at a rising of the 'palolo' but a small collection of the spawning that took place at Fanalei on 2-3.xi.66 was kindly forwarded by Wilson Ifunaoa. Dredging operations were confined to the New Georgia Group where a survey of the benthos of Marovo Lagoon was carried out during the period 22.x-14.ix in conjunction with the studies of Dr. D. R. Stoddart.

The nomenclature used in this paper is that of Hartman (1959, 1965) although later revisions by various authors have been followed. The classification used by Day (1967) has been adopted. The usage of the place-names in the Solomon Islands is that given on the Directorate of Overseas Survey Map (1 : 1,000,000). Other names are taken from the Admiralty Charts or are local names, the spelling of which must be regarded as provisional.

The collections, including the type specimens, have been deposited in the British Museum (Natural History).

COMPOSITION OF THE POLYCHAETE FAUNA AND ITS ZOOGEOGRAPHICAL AFFINITIES

The collection of polychaetes from the Solomon Islands comprises over 2000 specimens and is composed of 220 species.* Of this total, 88 (40%) of the species are represented by only one or two specimens. Thus the actual number of species in the fauna must be much higher, perhaps as high as 400, since probably many of the smaller and less conspicuous species, including many of the syllids as well as the paraonids and spirorbids, were overlooked in the field. The species composition of the fauna by families is given in Table 1. The errantiate families Aphroditidae (24 species), Eunicidae (22) and Syllidae (20) are well represented and in total account

* See Appendix

for about one-half of the errant species. Sedentary species are fewer (97 out of the total of 220) with the family Spionidae (15) containing the most species. In the

TABLE I

The species composition of the Solomon Islands fauna by families.

Family	No. of species	Family	No. of species
Aphroditidae	24	Chaetopteridae	6
Palmyridae	3	Cirratulidae	5
Amphinomidae	10	Cossuridae	1
Phyllodocidae	13	Flabelligeridae	1
Pilargidae	2	Scalibregmidae	2
Hesionidae	4	Opheliidae	5
Syllidae	20	Sternaspidae	1
Sphaerodoridae	1	Capitellidae	7
Nereidae	16	Arenicolidae	1
Nephtyidae	3	Maldanidae	8
Lacydoniidae	1	Oweniidae	4
Glyceridae	4	Sabellariidae	2
Eunicidae	22	Pectinariidae	1
Orbiniidae	2	Ampharetidae	2
Spionidae	15	Terebellidae	10
Magelonidae	2	Sabellidae	11
Trochochaetidae	2	Serpulidae	9
	TOTAL		220

collection, two new genera, namely *Cryptonereis* n.gen. and *Solomononereis* n.gen. (Family Nereidae), 13 new species and three new subspecies are present. The new species and subspecies are the following:

Family Aphroditidae	<i>Hololepidella ophiuricola</i> n.sp.
	<i>Lepidasthenia guadalcanalis</i> n.sp.
Family Hesionidae	<i>Gyptis maraunibinae</i> n.sp.
Family Nereidae	<i>Cryptonereis malaitae</i> n.gen., n.sp.
	<i>Solomononereis marauensis</i> n.gen., n.sp.
Family Nephtyidae	<i>Nephtys (Aglaophamus) munamaorii</i> n.sp.
Family Eunicidae	<i>Eunice marovoi</i> n.sp.
Family Spionidae	<i>Dispio maroroi</i> n.sp.
	<i>Polydorella novaegeorgiae</i> n.sp.
	<i>Prionospio tetelensis</i> n.sp.
	<i>Scolecopsis squamata mendanai</i> n. subsp.
Family Trochochaetidae	<i>Poecilochaetus serpens honiarae</i> n. subsp.
Family Flabelligeridae	<i>Diplocirrus glaucus orientalis</i> n. subsp.
Family Opheliidae	<i>Ophelia koloana</i> n.sp.
Family Oweniidae	<i>Myriochele heruensis</i> n.sp.
Family Terebellidae	<i>Pista dibranchis</i> n.sp.

The species collected in the Solomon Islands are listed in Table 2. From the material three species – all maldanids – can be identified to the subfamily level only, 17 are referable to their genus and a further six can be given near identifications to comparable species. Excluding these species and also the new species and sub-species a total of 178 species is available for analysis.

TABLE 2

List of species taken in the Solomon Islands.

APHRODITIDAE

Gastrolepidia clavigera Schmarda
Harmothoe nigricans Horst
Harmothoe sp.
Hololepidella nigropunctata (Horst)
H. ophiuricola n.sp.
Iphione muricata (Savigny)
Lepidasthenia elegans (Grube)
L. maculata Potts
L. guadalcanalis n.sp.
L. microlepis Potts
L. stylolepis Willey
Lepidonotus (*Thormora*) *jukes* (Baird)
Paradyte crinoidicola (Potts)
Paralepidonotus ampulliferus (Grube)
P. indicus (Potts)
Polyodontes maxillosus (Ranzani)
P. melanonotus (Grube)
Psammolyce zeylanica Willey
Sigalion bandaensis Horst
Sthenelais heterochela Horst
S. zeylanica Willey
Sthenelanelia ehlersi (Horst)
Sthenolepis japonica (McIntosh)
Thalenessa digitata McIntosh

PALMYRIDAE

Bhawania goodei Webster
B. pottsiana Horst
Paleanotus debilis (Grube)

AMPHINOMIDAE

Amphinome nigrobranchiata Horst
Chloeia conspicua Horst
Euphrosine foliosa Aud. & M.-Ed.
E. myrtilosa Savigny
Eurythoe complanata (Pallas)
? Eurythoe sp.
Notopygos gregoryi Holly
N. sibogae Horst
Pareurythoe pitipanaensis De Silva
Pseudeurythoe paucibranchiata Fauvel

PHYLLODOCIDAE

Eteone japonensis McIntosh
Eulalia albopicta Marenzeller
E. viridis (Linnaeus)
E. (Pterocirrus) magalhaensis Kinberg
Notophyllum splendens (Schmarda)
Phyllodoce fristedti Bergström
P. malmgreni Gravier
P. pruvoti Fauvel
P. quadraticeps Grube
P. (Anaitides) madeirensis Langerhans
P. (Anaitides) parva Hartmann-Schröder
P. (Genetyllis) castanea (Marenzeller)
P. (Genetyllis) gracilis Kinberg

PILARGIDAE

Sigambra hanaokai (Kitamori)
Synelmis albin (Langerhans)

HESIONIDAE

Gyptis capensis (Day)
G. maraunibinae n.sp.
Hesione splendida Savigny
Leocrates chinensis Kinberg

SYLLIDAE

Autolytus sp.
Brania clavata (Claparède)
Exogone gemmifera Pagenstecher
E. uniformis Hartman
E. verugera (Claparède)
Haplosyllis spongicola (Grube)
Langerhansia cornuta (Rathke)
L. ? rosea (Langerhans)
Sphaerosyllis hirsuta Ehlers
Syllis longissima Gravier
Syllis sp. cf. *gracilis* Grube
Trypanosyllis coeliaca Claparède
T. (Trypanedentia) sp.
Typosyllis alternata (Moore)
T. armillaris (Müller)
T. brachycola (Ehlers)

T. exilis (Gravier)
T. lucida (Chamberlin)
T. prolifera (Krohn)
Typosyllis sp.

SPHAERODORIDAE

Sphaerodoridium claparedii (Greeff)

NEREIDAE

Ceratonereis costae (Grube)
C. erythraeensis Fauvel
C. mirabilis Kinberg
Cryptonereis malaitae n.g.n.sp.
Namalycastis indica (Southern)
Nereis (*Neanthes*) *caudata* (Delle Chiaje)
N. (*Neanthes*) *unifasciata* Willey
N. (*Neanthes*) cf. *kerguelensis* McIntosh
Perinereis cultrifera (Grube)
P. nigropunctata (Horst)
P. nuntia (Savigny)
Platynereis insolita Gravier
Pseudonereis anomala Gravier
P. masalacensis (Grube)
P. variegata (Grube)
Solomononereis marauensis n.g.n.sp.

NEPHTYIDAE

Nephtys (*Aglaphamus*) *munamaorii* n.sp.
N. (*Micronephthys*) *sphaerocirrata* Wesenberg-Lund
N. (*Nephtys*) sp. cf. *palatii* Gravier

LACYDONIIDAE

Paralacydonia weberi Horst

GLYCERIDAE

Glycera gigantea Quatrefages
G. lancadivae Schmarda
G. longipinnis Grube
G. rouxi Aud. & M.-Ed.

EUNICIDAE

Arabella iricolor (Montagu)
A. mutans (Chamberlin)
Dorvillea sp.
Drilonereis major Crossland
Eunice afra Peters
E. antennata (Savigny)
E. aphroditois (Pallas)
E. coccinea Grube
E. grubei Gravier
E. marovoi n.sp.
E. norvegica (Linnaeus)

E. tentaculata Quatrefages
E. tubifex Crossland
E. (*Palola*) *siciliensis* Grube
Lumbrineris latreilli Aud. & M.-Ed.
L. papillifera (Fauvel)
L. sphaerocephala (Schmarda)
Lysidice collaris Grube
Marphysa macintoshi Crossland
Nematonereis unicornis (Grube)
Oenone fulgida (Savigny)
Onuphis (*Nothria*) *holobranchiata* Marenzeller

ORBINIIDAE

Haploscoloplos bifurcatus Hartman
Naineris laevigata (Grube)

SPIONIDAE

Dispio maroroi n.sp.
Laonice cirrata (Sars)
Malacoceros indicus (Fauvel)
Nerinides sp. cf. *gilchristi* Day
Polydorella novaegeorgiae n.sp.
Prionospio cirrifera Wirén
P. ehlersi Fauvel
P. malmgreni Claparède
P. pinnata Ehlers
P. steenstrupi malayensis Caullery
P. tetelensis n.sp.
Pseudopolydora corallicola Woodwick
Pseudopolydora sp.
Scolecopsis squamata mendanai n.subsp.
Spio filicornis (Müller)

MAGELONIDAE

Magelona japonica Okuda
Magelona sp.

TROCHOCHAETIDAE

Poecilochaetus serpens homiarae n.subsp.
P. tropicus Okuda

CHAETOPTERIDAE

Chaetopterus variopedatus (Renier)
Mesochaetopterus sagittarius (Claparède)
Phyllochaetopterus elioti Crossland
P. herdmanni (Hornell)
P. socialis Claparède
Spiochaetopterus costarum costarum (Claparède)

CIRRATULIDAE

Cirriformia filigera (Delle Chiaje)
C. punctata (Grube)

Dodecaceria fistulicola Ehlers
D. laddi Hartman
Tharyx sp.

COSSURIDAE

Cossura costa Kitamori

FLABELLIGERIDAE

Diplocirrus glaucus orientalis n.subsp.

SCALIBREGMIDAE

Hyboscolex longiseta Schmarda
Scalibregma inflatum Rathke

OPHELIIDAE

Armandia lanceolata Willey
A. leptocirrus (Grube)
A. longicaudata (Caullery)
Ophelia koloana n.sp.
Polyophthalmus pictus (Dujardin)

STERNASPIDAE

Sternaspis scutata (Renier)

CAPITELLIDAE

Capitellethus dispar (Ehlers)
Capitobranthus sp.
Dasybranchus caducus (Grube)
Mastobranthus dollfusi Fauvel
M. trinchessii Eisig
Mediomastus sp. cf. *capensis* Day
Notomastus sp.

ARENICOLIDAE

Abarenicola claparedii claparedii (Levinsen)

MALDANIDAE

Clymenella (= *Macroclymene*) sp. 1
Clymenella (= *Macroclymene*) sp. 2
Clymenella (= *Euclymene*) sp.
Euclymeninae sp. A.
Euclymeninae sp. B.
Euclymeninae sp. C.
? *Nicomache* sp.
Praxillella sp.

OWENIIDAE

Myriochele eurystoma Caullery
M. heruensis n.sp.

Myriochele sp.
Owenia fusiformis Delle Chiaje

SABELLARIIDAE

Lygdamis ehlersi (Caullery)
L. indicus Kinberg

PECTINARIIDAE

Pectinaria (*Pectinaria*) *antipoda* Schmarda

AMPHARETIDAE

Isolda pulchella Müller
? *Sosane wireni* Caullery

TEREBELLIDAE

Amaeana trilobata (Sars)
Euthelepus kinseboënsis Augener
Eupolymnia nebulosa (Montagu)
Loimia medusa (Savigny)
Lysilla ubianensis Caullery
Pista dibranthis n.sp.
P. typha (Grube)
Reteterebella queenslandia Hartman
Terebella ehrenbergi Grube
Terebellides stroemi Sars

SABELLIDAE

Branchiomma cingulata (Grube)
Hypsicomus phaeotaenia (Schmarda)
Megalomma intermedium (Beddard)
M. linarezi (Rioja)
M. quadrioculatum (Willey)
M. trioculatum Reish
M. vesiculosum (Montagu)
Potamilla ehlersi Gravier
Sabella fusca Grube
S. melanostigma Schmarda
Sabellastarte sanctijosephi (Gravier)

SERPULIDAE

Filograna implexa Berkeley
Hydroides minax (Grube)
H. uncinata (Philippi)
Mercierella enigmatica Fauvel
Serpula hartmanae Reish
S. vermicularis Linnaeus
Spirobranchus coutierei (Gravier)
S. giganteus (Pallas)
Vermiliopsis glandigerus Gravier

At this stage a zoogeographical analysis of the Solomon Islands fauna can be regarded only as provisional since many areas within the Indo-Pacific still remain to be investigated and further records, as well as taxonomic revisions, will modify the known distribution patterns of many species. The data for this analysis are given in Table 3. The faunistic regions outlined in this table are necessarily broad: in the Pacific region, only those island groups for which the polychaete faunas are fairly well known are considered. As far as possible, synonymies have been taken into account. In compiling the distributional data for each species the following references have been consulted:

(i) Eastern Atlantic	Augener, 1918; Fauvel, 1923, 1927; Kirkegaard, 1959.
(ii) Mediterranean Sea	Fauvel, 1923, 1927.
(iii) South Africa	Day, 1967.
(iv) East Africa (Red Sea to 32°S)	Crossland, 1903, 1904, 1924; Day, 1962, 1967; Gravier 1900-1908.
(v) Indian waters (Persian Gulf to Andaman Is.)	De Silva, 1961, 1965, 1965 <i>a</i> ; Fauvel, 1953; Tampi & Rangarajan, 1964; Wesenberg-Lund, 1949.
(vi) South-west Australia	Augener, 1913, 1914; Fauvel, 1922; Kott, 1949.
(vii) Malay Archipelago (Malaya to New Guinea and including Philippine and Palau Is.)	Caullery, 1944; Ehlers, 1920; Fauvel, 1935, 1939; Horst, 1910-1924; Mesnil & Fauvel, 1939; Okuda 1937 <i>a</i> ; Pillai, 1965.
(viii) East Australia (south to Port Jackson)	Augener, 1927; Monro, 1931; Rullier, 1965; Russell, 1962; Straughan, 1967.
(ix) New Caledonia	Fauvel, 1947.
(x) Central Pacific (Society and adjacent Islands)	Fauvel, 1947; Monro, 1928, 1939, 1939 <i>a</i> .
(xi) New Zealand	Augener, 1924, 1926; Ehlers, 1904; Knox, 1951, 1951 <i>a</i> , 1960.
(xii) Marshall Islands	Hartman, 1954; Reish, 1968.
(xiii) Hawaii	Hartman, 1966; Straughan, 1969.
(xiv) Japan	Imajima & Hartman, 1964; Imajima, 1966-1967.

Of the total of 178 species recorded from the Solomon Islands, 21 or 11.8% are considered to be cosmopolitan in their distribution and can be eliminated from the analysis in order to obtain a clearer pattern of the faunal relationships.

As expected, the Solomon Islands fauna has a large overlap with the faunas of the Malay Archipelago (61.1%) and of Indian waters (64.3%), and over one-half (55.4%) of the species are known to extend to the east coast of Africa. Thus the Indo-west-Pacific component forms a high proportion of the Solomon Islands fauna. In the Pacific region, it is interesting that the number of species in common between the

TABLE 3

	East Atlantic	Mediterranean	South Africa	East Africa	Indian waters	South-west Australia	Malay Archipelago	East Australia	New Caledonia	Central Pacific	New Zealand	Marshall Islands	Hawaii	Japan
Total number of species in common (Sol. Is. total = 178)	76	53	58	105	122	38	113	53	53	31	32	57	36	65
Number of cosmopolitan species in common (Sol. Is. = 21)	21	18	19	18	21	7	17	12	10	6	13	11	11	16
Number of non-cosmopolitan species in common (157 species)	55	35	39	87	101	31	96	41	43	25	19	46	25	49
Percentage	35.0	22.3	24.8	55.4	64.3	19.7	61.1	26.1	27.4	15.9	12.1	29.3	15.9	31.2

Analysis of the zoogeographical affinities of the Solomon Islands fauna. The records for each of the Solomon Islands species occurring in the regions outlined above have been taken from the references given in the text: a summary table of these data has been deposited in the Polychaeta Section of the British Museum (Natural History).

Solomon Islands and other Island groups lying within the tropics decreases with increasing distance: the faunas of both New Caledonia and the Marshall Islands show similar affinities (27.4% and 29.3% respectively) as do the faunas of the islands of the Central Pacific (15.9%) and Hawaii (15.9%). A relatively high proportion of the Solomon Islands species extend to Japan (31.2%) but fewer than expected have been recorded from the east coast of Australia (26.1%) although this percentage should probably be much higher.

It is difficult to compare these results with those of previous analyses because of the lack of earlier records from the tropical west Pacific. For example, Knox (1958) had records of only 81 species from this region (Micronesia – Melanesia) for his analysis of the distribution of polychaetes in the Indo-Pacific region and of this total 27% were Indo-Pacific and 31% were cosmopolitan. However the larger number of records from the present survey indicates that the Indo-Pacific element is proportionally much greater. Interestingly, previous estimates of the Indo-Pacific element in the faunas of New Zealand and Japan, of 12% and 30% respectively (Knox, 1963; Imajima & Hartman, 1964), closely correspond to the overlaps calculated above between these two regions and the Solomon Islands, the fauna of the latter being essentially Indo-Pacific.

The records from the Solomon Islands have extended the known distribution of thirteen species from the Indian Ocean to the West Pacific region. These species are *Lepidasthenia stylolepis*, *Psammolyce zeylanica*, *Pareurythoe pitipanaensis*, *Phyllodoce fristedti*, *Syllis longissima*, *Platynereis insolita*, *Lumbrineris papillifera*, *Marphysa macintoshi*, *Prionospio ehlersi*, *Phyllochaetopterus elioti*, *P. herdmanni*, *Spiochaetopterus costarum costarum* and *Megalomma quadrioculatum*. A further six species were known only from Atlantic or Mediterranean waters, namely *Trypanosyllis coeliaca*, *Sphaerodoridium clapedii*, *Mastobranchus dollfusi*, *M. trinchessii*, *Abarenicola clapedii*, and *Megalomma linaresei*.

As noted above the fauna of the Solomon Islands appears to be essentially Indo-Pacific and apart from the new species and subspecies that were discovered, relatively few of the species remain unrecorded from the Indian Ocean. This Pacific element in the fauna is represented by such species as *Notopygos gregoryi*, *Eteone japonensis*, *Phyllodoce pruvoti*, *P. (Anaitides) parva*, *Sigambra hanaokai*, *Exogone uniformis*, *Typosyllis brachycola*, *T. lucida*, *Pseudonereis masalacensis*, *Haploscoloplos bifurcatus*, *Pseudopolydora corallicola*, *Poecilochaetus tropicus*, *Reteterebella queenslandia*, *Megalomma trioculatum* and *Serpula hartmanae*. However most of these species have few records and probably have yet to be discovered elsewhere.

ECOLOGICAL OBSERVATIONS

Littoral survey

Although it is not practicable to list fully the species taken at each of the littoral stations, the short accounts that follow are presented as an outline of the ecological assemblages of species encountered in several of the more important habitats, in particular, those found on the reef platforms along the more exposed shorelines

and those composing the infauna of certain sedimentary deposits present in sheltered coastal areas. The habitats of each species are given in the Systematic Account. The tidal range in the Solomon Islands is small, being about 1.0 m in amplitude at springs, and investigations were generally concentrated between mid-tide level and low water mark.

The importance of the boring activities of polychaetes was recognized by Gardiner (1903) who regarded them as the "prime and most effective agents" in the destruction of coralline rocks. This view has been supported by Johnson (in Hartman, 1954). Boring is effected chiefly by the abrasive action of either hard pharyngeal structures, such as possessed by the nereids and eunicids, or by modified setae, as in certain spionids and cirratulids (Hartman, 1954). However as pointed out by Utinomi (1953) it is often difficult to distinguish between those species which actually bore into the coral from those which utilize and perhaps enlarge the vacated burrows made by boring species. For example, from its habit the sabellid *Hypsicomus phaeotaenia* appears to be a boring species but it does not possess hard chitinated structures that could be used for penetration. Whether chemical action is employed by such a species has yet to be investigated. Few polychaetes contribute to reef formation by virtue of their construction of massed tubes and in the Solomon Islands only *Spirobranchus giganteus* appears to be sufficiently common to be considered a minor contributor to reef growth.

On the reef platforms at moderately or very exposed localities, such as at Matiu, Batuona and Gizo, sedentary species are surprisingly few although quite extensive colonies of *Phyllochaetopterus socialis* are often present in places. On the other hand, errant species are fairly numerous, particularly the nereids and eunicids, which form the bulk of the destructive species, including *Perinereis nigropunctata*, *Pseudonereis anomala*, *P. masalacensis*, *P. variegata* and perhaps *Platynereis insolita*, together with *Eunice afra*, *E. antennata*, *E. coccinea*, *E. tentaculata*, *E. (Palola) siciliensis* and *Lysidice collaris*. Other species which may contribute to reef breakdown are *Nematonereis unicornis*, *Arabella mutans*, *Dodecaceria fistulicola* and *Hypsicomus phaeotaenia*. Many of these boring species are also common amongst the surface cover on the reef, that is, amongst algal growth (e.g. *Amphiroa*), or *Phyllochaetopterus* tubes, where they accompany the crevice-dwelling species which utilize such shelter when the reef is exposed at low-tide. The crevice-dwelling species are many and are represented by *Lepidonotus (Thormora) jukesi*, *Paleanotus debilis*, *Eurythoe complanata*, *Euphrosine myrtillosa*, *Eulalia (Pterocirrus) magalhaensis*, *Phyllodoce fristedti*, *P. pruvoti*, *P. quadraticeps*, *Synelmis albini*, *Exogone gemmifera*, *Syllis longissima*, *Trypanosyllis coeliaca*, *Typosyllis alternata*, *T. armillaris*, *T. brachycola*, *T. prolifera*, *Cirriiformia punctata* and *Terebella ehrenbergi*. Encrusting forms include *Vermiliopsis glandigerus* and *Hydroides minax*. An inconspicuous species of this habitat is *Bhawania goodei* which, although found free-living, most frequently occurs as a commensal in the burrows of the sipunculids *Aspidosiphon elegans*, *Cloeosiphon aspergillum* and *Phascolosoma albolineatum*.

In sheltered localities the reef platforms are generally covered by a layer of sediment which is often composed of a wide variety of deposit grades ranging from

sticky mud to coarse coral debris. At Tetel Island it was possible to investigate an assortment of deposits in a small area and the following lists of species discovered in four different grades of sediment give an indication of the diversity of the polychaete infauna.

(i) In muddy silt-sand at about mid-tide level: *Iphione muricata*, *Lepidasthenia elegans*, *L. maculata*, *Sthenelais zeylanica*, *Eurythoe complanata*, *Eteone japonensis*, *Phyllodoce malmgreni*, *Langerhansia cornuta*, *Onuphis* (*Nothria*) *holobranchiata*, *Malacoceros indicus*, *Poecilochaetus serpens honiarae* n. subsp., *P. tropicus*, *Mesochaetopterus sagittarius*, *Phyllochaetopterus elioti*, *P. herdmani*, *Pista dibranchis* n.sp., *P. typha* and *Megalomma vesiculosum*. *L. elegans* and *L. maculata* were discovered cohabiting the tubes of *M. sagittarius* and *P. herdmani* respectively. Living under coral boulders lying on this fine deposit, further species were uncovered, namely, *Pseudeurythoe paucibranchiata*, *Typosyllis alternata*, *T. brachycola*, *Perinereis cultrifera*, *P. nuntia*, *Glycera lancadivae*, *Nematonereis unicornis*, *Arabella iricolor*, *Spiochaetopterus costarum costarum*, *Hyboscolex longiseta*, *Dasybranchus caducus*, *Lysilla ubianensis* and *Loimia medusa*.

(ii) In coarse coral debris, chiefly *Acropora* fragments, towards low water mark: *Eurythoe complanata*, *Notopygos sibogae*, *Pseudeurythoe paucibranchiata*, *Leocrates chinensis*, *Ceratonereis mirabilis*, *Eunice aphroditois*, *E. (Palola) siciliensis*, *Cirriformia filigera*, *Armandia lanceolata*, *Loimia medusa*, *Reteterebella queenslandia*, *Branchiommata cingulata*, *Hypsicomus phaeotaenia*, *Megalomma intermedium*, *M. linaresi*, *Sabellastarte sanctijosephi*, *Spirobranchus giganteus* and *S. coutierei*.

(iii) In shell gravel at low water mark: *Lepidonotus* (*Thormora*) *jukesi*, *Amphinome nigrobranchiata*, *Pareurythoe pitipanaensis*, *Leocrates chinensis*, *Glycera lancadivae*, *Eunice (Palola) siciliensis*, *Onuphis* (*Nothria*) *holobranchiata*, *Mesochaetopterus sagittarius* and *Dasybranchus caducus*.

(iv) In coarse coral sand just below low water mark: *Eurythoe complanata*, *Magelona japonica*, *Poecilochaetus serpens honiarae* n. subsp., *P. tropicus*, *Mesochaetopterus sagittarius*, *Spiochaetopterus costarum costarum*, *Capitobranchus* sp., *Dasybranchus caducus*, *Mastobranchus trinchessii*, ?*Nicomache* sp., *Pista dibranchis* n. sp. and *Megalomma vesiculosum*.

At Graham Point in Marau Sound (east Guadalcanal) extensive deposits of silty sand mixed with shell gravel are colonised by marine angiosperms (*Thalassia* and others) and support a rich and varied fauna. Of the polychaetes encountered here the most interesting are three *Lepidasthenia* species which were found living as commensals. *L. microlepis* and *L. stylolepis* were both discovered in the burrows of the sipunculid *Siphonosoma vastus* while the third species, *L. guadalcanalis* n.sp., was an inhabitant of the burrows of a large enteropneust (probably *Balanoglossus carnosus*). The polychaete infauna comprises the following species: *Polyodontes maxillosus*, *Psammodice zeylanica*, *Sthenelais zeylanica*, *Amphinome nigrobranchiata*, *Eurythoe complanata*, *Pseudeurythoe paucibranchiata*, *Glycera gigantea*, *G. lancadivae*, *Eunice (Palola) siciliensis*, *Naineris laevigata*, *Dispio maroroi* n.sp., *Scolecopsis squamata mendanai* n.subsp., *Poecilochaetus tropicus*, *Mesochaetopterus sagittarius*, *Dasybranchus caducus*, *Mastobranchus trinchessii*, *Clymenella (Macroclymene)* sp. and

Pista dibranchis n.sp. Many of these species are also found below coral boulders together with further species including *Iphione muricata*, *Sigalion bandaënsis*, *Notopygos sibogae*, *Pareurythoe pitipanaensis*, *Phyllodoce madeirensis*, *Notophyllum splendens*, *Synelmis albi*, *Gyptis maraunibinae* n.sp., *Hesione splendida*, *Typosyllis brachycola*, *Perinereis nigropunctata*, *Eunice antennata*, *E. grubei*, *Lysidice collaris*, *Lumbrineris latreilli*, *Eupolymnia nebulosa*, and *Euthelepus kinsemboënsis*. In this habitat, *Hololepidella nigropunctata* and *H. ophiuricola* n.sp. are also found but living as commensals on ophiuroids.

Dredge Survey of Marovo Lagoon

Along the north-east coast of New Georgia Island and around the north and east coasts of Vangunu Island in the New Georgia Group, elevated barrier reefs form the

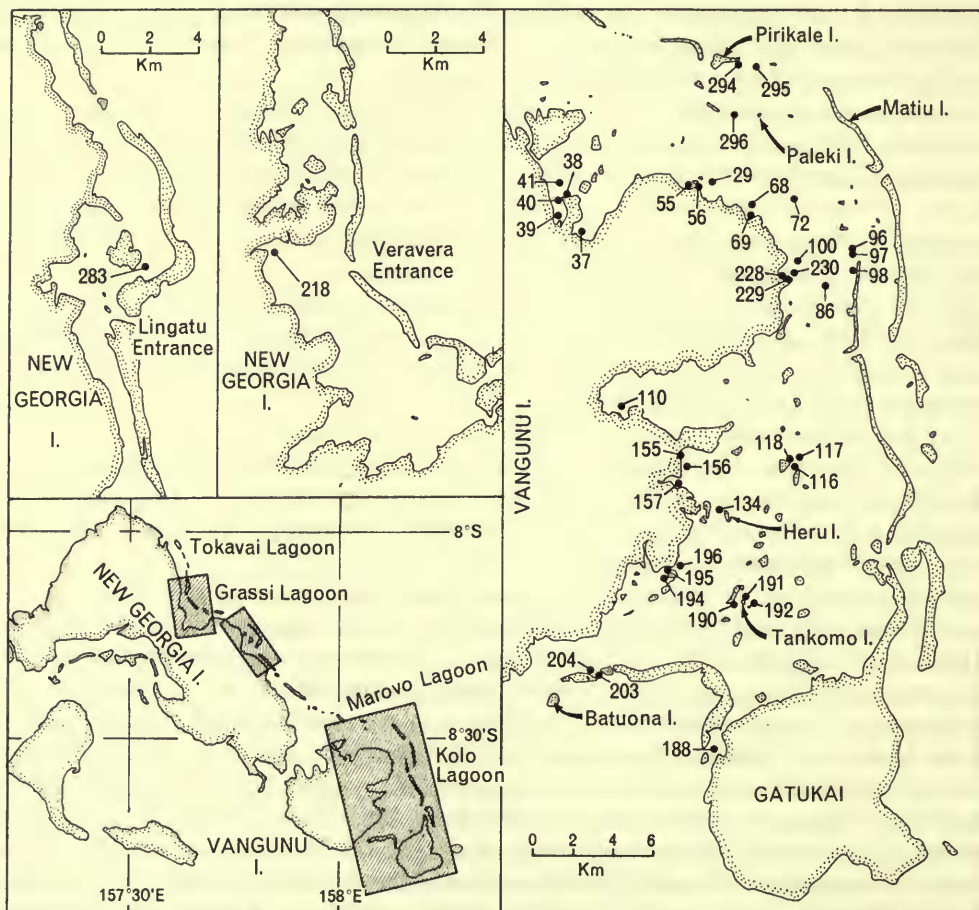


FIG. 2. Collection localities and positions of the dredge stations in Marovo Lagoon, New Georgia Group.

seaward edge of a more or less continuous lagoon. This lagoon is about 10 km across at its widest point, and its depth is less than 50 m over most of its area. Marovo Lagoon forms the central part of this lagoon, the northern extension being Tokavai and Grassi Lagoons and the southern part Kolo Lagoon. However, for convenience, these lagoons will be collectively referred to as Marovo Lagoon. The geomorphology of the region has been described by Stoddart (1969).

A benthic survey of Marovo Lagoon was carried out in October and November 1965. Qualitative samples of the bottom deposits were taken at 40 stations in depths from 2 to 35 m, using a small naturalist's dredge. Two stations (ML 218 and 283) were worked in the northern part of the lagoon, the rest being situated in the central and eastern parts (fig. 2). The fauna was extracted from the samples (between 10 and 20 l of sediment) by sieving through a mesh of 1.0 or 2.0 mm diameter. The bottom deposits vary from thick terrigenous mud, which occurs close to the mainland, to coarse coralline sands which are found along the inner margins of the outer reefs. The station data are given in Table 4.

TABLE 4

Dredge survey of Marovo Lagoon: station data. See fig. 2 for station positions.

Station (ML)	Date (1965)	Depth (m)	Deposit	Station (ML)	Date (1965)	Depth (m)	Deposit
29	22.x.	22	Silty mud	155	30.x.	9	Mud
37	23.x.	22	Mud	156	30.x.	18	Mud
38	23.x.	9	Silty mud	157	30.x.	13	Mud
39	25.x.	11	Mud	188	1.xi	18	Mud
40	25.x.	18	Mud	190	1.xi	5	Sand
41	25.x.	20	Mud	191	1.xi	2	Silty sand
55	26.x.	11	Silty mud	192	1.xi	18	Coarse sand
56	26.x.	9	Silty mud	194	2.xi	11	Mud
68	27.x.	2	Mud	195	2.xi	11	Mud
69	27.x.	13	Silty mud	196	2.xi	2	Silty sand
72	27.x.	35	Silty sand	203	3.xi	4	Coarse sand
96	28.x.	9	Sand	204	3.xi	18	Coarse sand
97	28.x.	9	Sand	218	8.xi	18	Mud
98	28.x.	11	Sand	228	10.xi	5	Mud
100	28.x.	33	Mud	229	10.xi	5	Sand
110	28.x.	26	Mud	230	10.xi	24	Silty sand
116	29.x.	15	Silty sand	283	13.xi	2	Coarse sand
117	29.x.	5	Sand	294	14.xi	4	Coarse sand
118	29.x.	2	Sand	295	14.xi	4	Coarse sand
134	29.x.	16	Foram sand	296	14.xi	2	Coarse sand

A total of 65 species were taken during the survey of which 43 were not recorded from the littoral zone. This category includes all the species records of the families Nephtyidae (3 species), Lacydoniidae (1), Cossuridae (1), Flabelligeridae (1), Sternaspidae (1), Oweniidae (4), Pectinariidae (1), and Ampharetidae (2). In addition the

survey provided specimens of four new species, namely, *Nephtys* (*Aglaophamus*) *munamaorii* n.sp., *Polydorella novaegraegiae* n.sp., *Ophelia koloana* n.sp. and *Myriochele heruensis* n.sp. and also one new subspecies, *Diplocirrus glaucus orientalis*. Of the species taken, ten have not been recorded from the West Pacific, outside of the Malay Archipelago (*Sthenelais heterochela*, *S. zeylanica*, *Sthenelanelle ehlersi*, *Chloeia conspicua*, *Prionospio steenstrupi malayensis*, *Armandia longicaudata*, *Myriochele eurystoma*, *Isolda pulchella*, *Sosane wireni* and *Lysilla ubianensis*) and the distributions of two species (*Lumbrineris papillifera* and *Prionospio ehlersi*) are extended from the coast of East Africa. A further two species, namely, *Pseudopolydora corallicola* and *Megalomma trioculatum*, have been described only recently from the Marshall Islands. *Haploscoloplos bifurcatus* was previously known only from south and south-east Australia.

The survey provides some indications of the distribution of the commoner species with respect to the bottom deposits. Arbitrarily defining a "common" species as one that was present at three or more stations, the following appear to be mainly restricted to the finer grades of sediments (mud and fine sands)—*Sthenelais heterochela*, *Sthenolepis japonica*, *Pseudeurythoe paucibranchiata*, *Sigambra hanaokai*, *Nephtys* (*Aglaophamus*) *munamaorii* n.sp., *Paralacydonia weberi*, *Haploscoloplos bifurcatus*, *Prionospio ehlersi*, *P. pinnata*, *P. tetelensis* n.sp., *Diplocirrus glaucus orientalis* n. subsp., *Armandia lanceolata*, *Mastobranchus dollfusi*, *Isolda pulchella*, *Loimia medusa*, and *Terebellides stroemi*. The coarser deposits (medium to coarse sands) appear to support sparse polychaete populations and only *Owenia fusiformis* was taken in any numbers. Species that tolerate a wide range of deposit grades include *Glycera gigantea*, *G. lancadivae*, *Eunice marovoi* n.sp., *Prionospio steenstrupi malayensis*, *Armandia leptocirrus*, *Pectinaria* (*Pectinaria*) *antipoda*, and *Pista dibranchis* n.sp. Apart from these common species, several appear to be locally abundant, to judge from the large numbers present at single stations. For example, *Onuphis* (*Nothria*) *holobranchiata* was abundant in the sample of the thick mud at ML 69. Small species such as *Polydorella novaegraegiae* n.sp. and *Myriochele heruensis* n.sp. were probably much more abundant than the sample figures at ML 39 and ML 134 suggest, no doubt many specimens being lost during sieving.

Commensal polychaetes

During the routine sampling of a number of habitats, a total of twelve species, mainly polynoids, were discovered living in association, apparently as commensals, with other animals, principally echinoderms and sipunculids. Observations on these associations have been presented in an earlier paper (Gibbs, 1969) but for the sake of completeness the commensal species and their hosts are summarized in Table 5.

Although Macnae & Kalk (1962) have described similar associations from the coast of Moçambique, probably many have yet to be discovered throughout the Indo-Pacific region. Undoubtedly the echinoderms which act as hosts for *G. clavigera*, *Hololepidella* spp. and *P. crinoidicola*, are more numerous than the present records indicate.

TABLE 5

Summary of the commensal polychaetes and their hosts in the Solomon Islands. Abbreviations: Po – Polychaeta; Si – Sipunculoidea; Ga – Gastropoda; Oph – Ophiuroidea; Ho – Holothuroidea; Cr – Crinoidea.

Commensal	Host(s)
<i>Bhawania goodei</i>	<i>Aspidosiphon elegans</i> (Si) <i>Cloeosiphon aspergillum</i> (Si) <i>Phascolosoma albolineatum</i> (Si)
<i>B. pottsiana</i>	<i>Eurythoe complanata</i> (Po)
<i>Eunice marovoi</i> n.sp.	<i>Cerithium vertagus</i> (Ga)
<i>Gastrolepidia clavigera</i>	<i>Bohadschia argus</i> (Ho) <i>B. graffei</i> (Ho) <i>Holothuria (Halodeima) atra</i> (Ho) <i>Stichopus chloronotus</i> (Ho) <i>Thelenota ananas</i> (Ho)
<i>Hololepidella nigropunctata</i>	<i>Ophiarthrum elegans</i> (Oph) <i>Ophiocoma brevipes</i> (Oph) <i>O. insularia</i> forma <i>dentata</i> (Oph)
<i>H. ophiuricola</i> n.sp.	<i>Macrophiothrix koehleri</i> (Oph) <i>Ophiarthrum pictum</i> (Oph)
<i>Lepidasthenia elegans</i>	<i>Mesochaetopterus sagittarius</i> (Po)
<i>L. guadalcanalis</i> n.sp.	Enteropneust (<i>Balanoglossus carnosus</i> ?)
<i>L. maculata</i>	<i>Phyllochaetopterus herdmanni</i> (Po)
<i>L. microlepis</i>	<i>Paraspidosiphon cumingi</i> (Si) <i>Siphonosoma vastus</i> (Si)
<i>L. stylolepis</i>	<i>Siphonosoma vastus</i> (Si)
<i>Paradyte crinoidicola</i>	<i>Himerometra robustipinna</i> (Cr)

Recently, Dr R. U. Gooding kindly sent the author three specimens of *H. nigropunctata* taken from two *Acanthaster planci* L. collected at Kira-Kira, San Cristobal I. (3.xii.69) and a further specimen taken from *Diadema savignyi* Michelin collected on the Reef Is., Santa Cruz Is. (8.xii.69).

Brackish water and terrestrial species

Investigations of brackish water were mainly confined to a lagoon at Lunga Point, near the mouth of the Lunga River on the north coast of Guadalcanal. At the time of examination (9.ix–11.ix) the salinity of the lagoon was 5.6‰, whilst that of the outside seawater was 34.5‰. Three polychaete species were discovered in this habitat, namely *Namalycastis indica*, *Pseudopolydora* sp. and *Mercierella enigmatica*. Specimens of *N. indica* were found burrowing amongst the fibres composing the outer husk of the *Nipa* palm nut, many of which were lying waterlogged along the water's edge. The two other species were present in large numbers within the interstices of a sponge that was growing around submerged tree roots. The specimens of *Pseudopolydora* have proved to represent a new species (W. J. Light, personal communication) and those of the cosmopolitan *M. enigmatica* are also of interest in that they show the characters of *Neopomatus* and thus support Straughan's (1966) evidence for the belief that *Neopomatus* is the warm water form of *Mercierella*. Further details of these two species are given below in the Systematic Account.

Wesenberg-Lund (1958) has shown that the majority of freshwater polychaetes

are nereids and thus it is not surprising that those species which have been discovered in damp terrestrial habitats also belong to this family, in particular to the subfamily Namanereinae. In view of the fact that terrestrial forms are well documented from the East Indies (see Feuerborn, 1932; Lieber, 1931; Pflugfelder, 1933) their discovery in the nearby Solomon Islands is to be expected.

Two small specimens belonging to the Namanereinae were separately collected by members of the Expedition Land Party (Dr. J. Greenslade and Mr. J. Peake) on Mt. Austen, Guadalcanal and on Kolombangara in the New Georgia Group. Both were taken from moist leaf litter at an altitude of 350 m. Unfortunately the identity of these important specimens is uncertain due to damage and although they closely resemble *Namanereis amboinensis* (Pflugfelder) they may belong to *Cryptonereis malaitae* n.gen., n.sp., described below, which may also be a damp terrestrial form. Until further specimens from relatively high altitudes are available the status of these specimens must remain undetermined. Any information concerning their mode of reproduction would be of great interest.

Spawning of *Eunice (Palola) siciliensis*

The spawning of the circumtropical species *Eunice (Palola) siciliensis* is well documented for the Pacific region and accounts of this phenomenon, which usually takes place in October or November, have been given by many authors, notably Burrows (1945, 1955), Caspers (1961), Gravier (1924), Miller & Pen (1959), Stair (1847) and Woodworth (1907). Although the Samoan name 'palolo' is the most commonly used for this species, it has a variety of names, being known as 'paroro' on Rotuma, 'balolo' in the Fiji Islands, and 'hundu' in the New Hebrides. In the Solomon Islands it has several names; in the Florida Islands, West Guadalcanal and on Malaita it is called either 'ogu' or 'odu' and at the eastern end of San Cristobal it is known as 'parenga'. Lever (1945) records that it is called 'orku' on Ulawa Island. Collection of the 'rising' appears to be a dying custom in the Solomon Islands since many of the natives interviewed stated that they had not done so for many years and certainly only the older men could relate the details of the event. From their description of the rising, it would appear that the spawning of this species appears to be essentially similar to that described for other areas.

The author could not be present at a rising but fortunately a valuable collection of the spawning worms was obtained by Wilson Ifunaoa (a schoolboy attached to the Expedition) from Fanalei Island (also called Falelei or Halelei Island), off the south-east coast of Maramasike Island, Malaita. This collection was made at the time of the rising on 2-3.xi.66 and four species are represented - *Phyllodoce (Anaitides) madeirensis*, *Perinereis cultrifera*, *Eunice coccinea* and *Lysidice collaris*, in addition to *Eunice (Palola) siciliensis*. The details of this material, together with the spawning times provided by the collector, are given in Table 6. There can be little doubt that all five species were spawning at the same time because all of the specimens either contain apparently mature gametes or are in the 'spent' condition. In a

similar collection from the New Hebrides, Gravier (1924) records that *Lumbrineris sphaerocephala* and *Perinereis masalacensis* were present.

TABLE 6

Details of the material in the sample of the 'palolo' or 'ogu' rising at Fanalei, Malaita, collected on 2-3.xi.66 by Wilson Ifunaoa.

Species	Material	Time of spawning (hours)	Condition	Local name
<i>Phyllodoce</i> (<i>Anaitides</i>) <i>madeirensis</i>	3 specimens	1830-1900	Spent	Adio
<i>Perinereis</i> <i>cultrifera</i>	2 heteronereids (♀)	2000-2200	Ripe oocytes 200 μ in diameter	Falisu-ogu
<i>Eunice</i> <i>coccinea</i>	2 posterior fragments	0000-0600	Ripe oocytes 360 μ in diameter	Raka-raka
<i>Eunice</i> (<i>Palola</i>) <i>siciliensis</i>	4 posterior fragments	2000-2200	Ripe oocytes 200 μ in diameter	Falisu-ogu
<i>Lysidice</i> <i>collaris</i>	1 specimen	?	Spent	?

Also included in the collection of the 'palolo' or 'ogu' is a large specimen of *Notopygos gregoryi*, a species hitherto recorded only from Midway Island. It is thought that this specimen was feeding on the spawning worms as they emerged from the coral.

SYSTEMATIC ACCOUNT

The great majority of the records from the littoral zone were made between mid-tide level (MTL) and low water mark (LWM). Sublittoral or shallow-water samples were taken to a maximum depth of 35 m in Marovo Lagoon. For each species the number of specimens taken at each of the localities or stations (see figs 1 and 2) is given: where more than 20 specimens were found the species is indicated as numerous (num.)

Family APHRODITIDAE

Subfamily POLYNOINAE

Gastrolepidia clavigera Schmarda, 1861

Gastrolepidia clavigera Schmarda, 1861 : 159, pl. 36, fig. 316; Fauvel, 1953 : 51, fig. 22. d-f; Day, 1967 : 51, fig. 1.5. a-f.

HABITAT. A commensal of holothurians (see Gibbs, 1969 for notes).

RECORDS. On *Stichopus chloronotus* Brandt – Graham Pt. – 8; Maraunibina Is. – 12; Kalota Is. – 2; on *Holothuria* (*Halodeima*) *atra* Jaeger – Graham Pt. – 11; Kalota Is. – 5; Auki Hr. – num.; on *Bohadschia argus* Jaeger – Maraunibina Is. – 4; Kalota Is. – 15; on *Bohadschia graffei* Semper – Maraunibina Is. – 2; Yandina – 1; on *Thelenota ananas* (Jaeger) – Maraunibina Is. – 1.

DISTRIBUTION. Tropical Indo-west-Pacific.

Harmothoë nigricans Horst, 1915

Harmothoë nigricans Horst, 1915 : 14; 1917 : 90, pl. 20, figs 3–4.

HABITAT. Under coral boulders and in beachrock.

RECORDS. Tetel Is. – 1; Komimbo Bay – 4; Lauvie Is. – 1.

DISTRIBUTION. East Indies.

Harmothoë sp.

HABITAT. Crevice in reef platform.

RECORD. Maramasike Pg. – 1.

NOTES. The specimen has the typical harmothoid prostomium with pronounced lateral peaks and ventrally inserted lateral tentacles. The elytra number fifteen pairs and each carries large conspicuous tubercles. The latter are pear-shaped with wide bases, the largest of them being situated along the posterior margins of the elytra. Notosetae are numerous and coarsely serrated and neurosetae bidentate with a fine secondary tooth almost as long as the main one.

The specimen resembles *H. impar* (Johnston), known from Japan (Imajima and Hartman, 1964) but differs in that the elytral margins are strongly ciliated.

Hololepidella nigropunctata (Horst, 1915)

Polynoë nigro-punctata Horst, 1915 : 20; 1917 : 104, pl. 21, figs 15–17.

Hololepidella nigropunctata: Day, 1957 : 65, fig. 1. a-f; Devaney, 1967 : 287, figs 1–5; Pettibone, 1969a : 50, fig. 2. a-g.

Polyeunoa nigropunctata: Day, 1967 : 54, fig. 1.5. r-u.

Hololepidella minuta: Gibbs, 1969 : 449, fig. 131.

HABITAT. A commensal of ophiuroids living under coral boulders and in crevices on the reef platform (see Gibbs, 1969).

RECORDS. Graham Pt. – on *Ophiocoma brevipes* Peters – 8; on *Ophiocoma insularia* forma *dentata* Lütken – 1; on *Ophiarthrum elegans* Peters – 7.

NOTES. In the preliminary report on the commensal species (Gibbs, 1969) these specimens were referred to *Hololepidella minuta* (Potts, 1910) because they correspond, particularly in terms of their setae, with the type specimen of *Polynoë minuta* in the British Museum (Natural History). The latter specimen is incomplete however, having only 24 segments, and thus cannot be referred to the genus *Hololepidella* Willey with certainty because the generically characteristic, segmental arrangement of the elytra (Devaney, 1967; Pettibone, 1969a) cannot be checked. Unfortunately the type specimens of *Polynoë minuta* var. *oculata* Potts (1915) must be considered lost since they are not present in the British Museum nor in the Zoological Museum of the University of Cambridge (C. B. Goodhart, pers. comm.). Thus it seems advisable to refer the Solomon Islands specimens to *H. nigropunctata* (Horst) and to regard *P. minuta* as indeterminable. Possibly further specimens from crinoids at the type localities of *P. minuta* (South Male) and *P. minuta oculata* (Torres Straits) may clarify the problem.

DISTRIBUTION. Tropical Indo-west-Pacific to Hawaii.

***Hololepidella ophiuricola* n. sp.**

(Fig. 3. A-H)

Hololepidella commensalis: Gibbs, 1969 : 451, fig. 132.

DESCRIPTION. The largest specimen (holotype) measures 15 mm in length, is 2.5 mm wide and has 53 segments bearing 25 pairs of elytra. Smaller specimens have 41 to 50 segments bearing 19 to 24 pairs of elytra.

The prostomium has marked antero-lateral peaks and two pairs of eyes (fig. 3. A). The median antenna and tentacular cirri are long and the lateral antennae are short and ventral in origin. The palps are stout and between 1.5 to 2.0 times the length of the prostomium. Both dorsal and ventral cirri are relatively long, the former being about equal to the width of the body, the latter about equal to the length of the neuropodial lobe.

The elytra are oval in shape and completely cover the body. They have smooth margins and are transparent except for small, irregular patches of black pigment contained in polygonal-shaped cells (fig. 3. B, C). As is characteristic of the genus, the elytra are carried on segments 2, 4, 5, 7, 9, . . . 21, 23, 26, 29, 31, 34, 36 and on alternate segments to the posterior end. The number of elytra depends on the segment number and in four of the five specimens there are 24 or 25 pairs on 49 to 53 segments.

The notopodial lobe is rather small (fig. 3. D) and carries 16 to 20 notosetae, each of which is minutely serrated along one edge (fig. 3. E). The neuropodium is bilobed with a triangular pre-setal lip and a rounded post-setal lip. There are 3 or 4 supra-acicular and 6 to 8 sub-acicular neurosetae. Superior neurosetae have about 15 rows of spinules and a smooth, curved tip (fig. 3. F): inferior neurosetae are shorter and more slender with minute serrations (fig. 3. G, H).

All specimens have a darkly pigmented dorsal surface the pattern of which may vary according to the species of the host ophiuroid (see Gibbs, 1969). The cirri and antennae are dark, as are the palps which also show a white longitudinal line on their dorsal surface. Apart from a dark circular spot at the base of each parapodium, the ventral surface is unpigmented.

H. ophiuricola may be distinguished from the type species *H. commensalis* Willey and from *H. nigropunctata* by its notosetae, the ornamentation of which differs in all three species. Also *H. ophiuricola* differs from the former species in having a greater number of notosetae (16 to 20 compared to 8) and from *H. nigropunctata* in having unidentate, not bidentate neurosetae. It should be noted that in a recent review of the genus *Hololepidella* Pettibone (1969a) considers the records of *H. commensalis* given by Augener (1922) and Fauvel (1932) from the Indian Ocean are doubtful in view of the fact that both sets of specimens differ from the type description in having bidentate neurosetae.

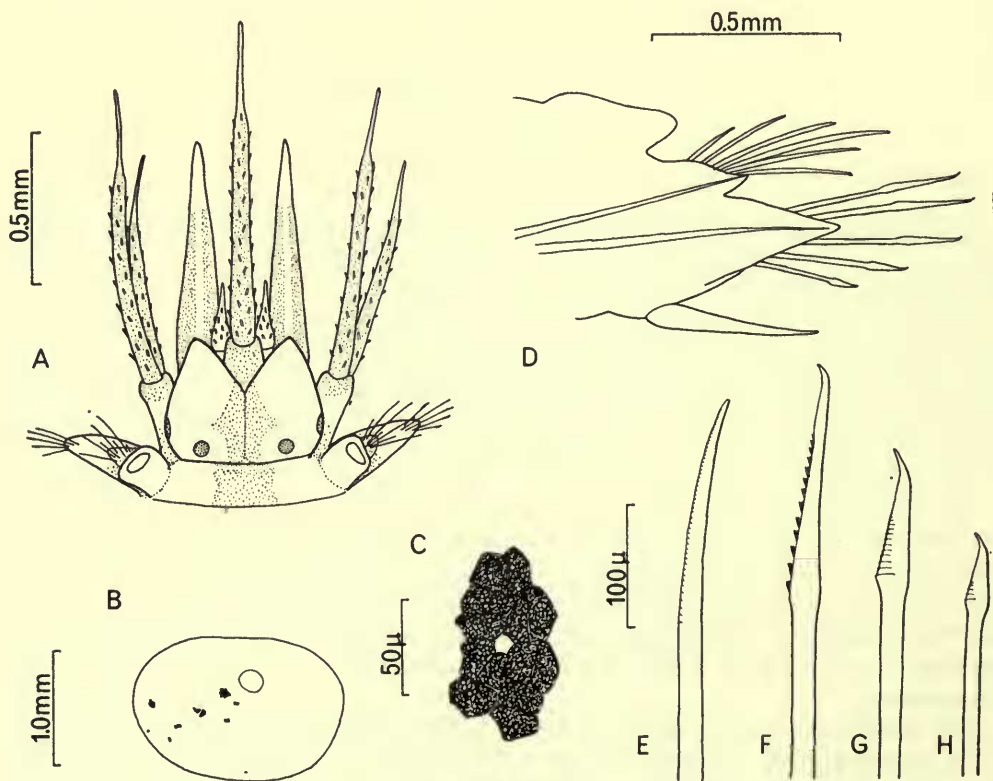


FIG. 3. *Hololepidella ophiuricola* n.sp. (A) Dorsal view of anterior region showing pigmentation. (B) Elytron from middle body. (C) Patch of pigment cells on elytron. (D) Elytrigerous parapodium from middle body. (E) Notoseta. (F-H) Superior and inferior neurosetae.

HABITAT. A commensal of ophiuroids living under coral boulders and in crevices on the reef platform.

RECORDS. Graham Pt. – on *Macrophiothrix koehleri* Clark – 4 (including holotype); Kalota Is. – on *Ophiarthrum pictum* Müller and Troschel – 1.

British Museum (Natural History) Registration No. Holotype 1970.20

Paratypes 1970.21–24

***Iphione muricata* (Savigny, 1818)**

Iphione muricata: Fauvel, 1953 : 32, fig. 13. a-e; Day, 1967 : 43, fig. 1.3. a-f.

HABITAT. Under coral boulders in muddy silt and sand.

RECORDS. Tetel Is. – 3; Komimbo Bay – 3; Maraunibina Is. – 2; Graham Pt. – 24.

DISTRIBUTION. Tropical Indo-west-Pacific.

***Lepidasthenia elegans* (Grube, 1840)**

Lepidasthenia elegans: Potts, 1910 : 342, pl. 19, fig. 16, pl. 20, fig. 32; Fauvel, 1923 : 88, fig. 33. a-g; Day, 1967 : 90, fig. 1.16. i-m.

HABITAT. In silt and cohabiting a tube of *Mesochaetopterus sagittarius* at LWM.

RECORDS. Tetel Is. – 2.

DISTRIBUTION. Mediterranean; Indo-west-Pacific.

***Lepidasthenia guadalcanalis* n. sp.**

(Fig. 4. A–F)

Lepidasthenia mossambica: Gibbs, 1969 : 453, fig. 134.

DESCRIPTION. The holotype is the largest of the six specimens and measures 85 mm for about 125 segments. Preserved in alcohol the colour is pale brown with darker bars across the anterior segments. The fourth pair of elytra is coloured reddish-brown (fig. 4. A) but the other elytra are colourless.

The prostomium is roughly hexagonal in shape and has two pairs of eyes situated on the antero-lateral and posterior margins (fig. 4. B). The median and lateral antennae are terminal in origin and are about one half the length of the stout palps. The tentacular cirri are slightly longer than the antennae. The posterior margin of the prostomium is hidden by a conspicuous occipital flap which is heavily papil-

lated. Similar papillae are to be found along the anterior and posterior edges of the anterior segments on their dorsal side and a few are present on the dorsal and ventral surfaces of the neuropodial lobes.

The elytra, which are arranged segmentally in the typical polynoid sequence, are thin, circular in shape and do not cover the mid-dorsal region of the body. They have smooth margins and lack papillae. Only the fourth pair, on segment 7, is pigmented and the others are almost transparent.

The dorsal cirri are about equal in length to the neuropodial lobes. The notopodial lobes are small and supported by an aciculum but the neuropodial lobes are well-developed with rounded, subequal, pre-setal and post-setal lips and short ventral cirri (fig. 4. c).

Notosetae appear to be entirely lacking. In the anterior segments the neurosetae are slender with a small subterminal tooth (fig. 4. D, E) and number about 30 per neuropodium. However in the middle body segments, the neurosetae are much stouter, fewer in number (14 or 15 per neuropodium) and lack subterminal teeth (fig. 4. F). The number of rows of spinules possessed by these setae is similar

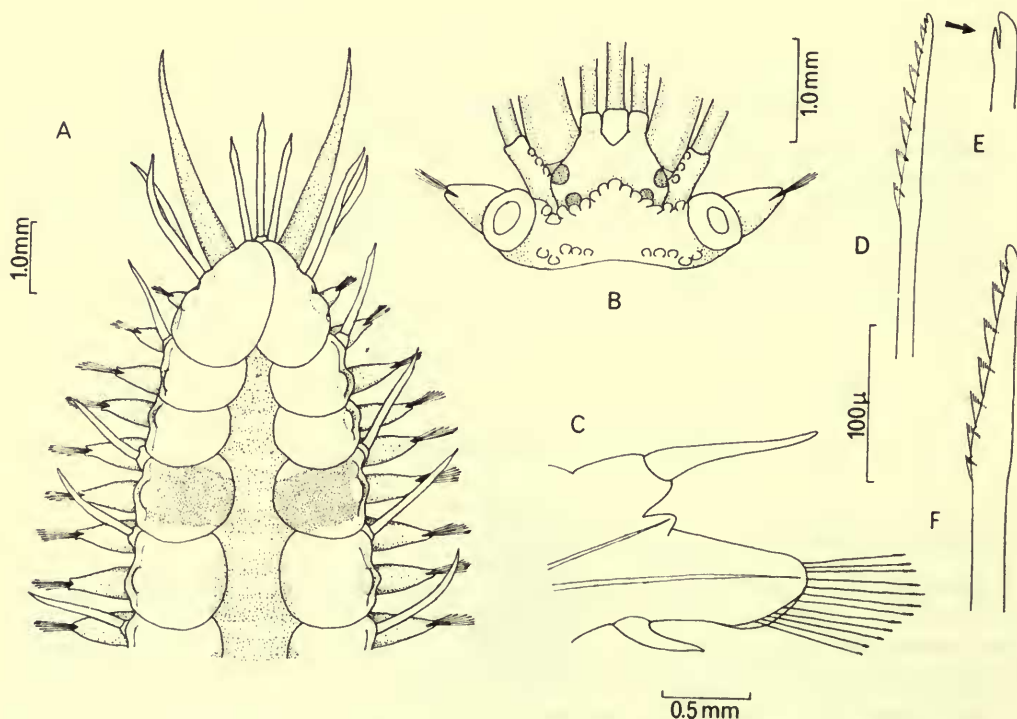


FIG. 4. *Lepidasthenia guadalcanalis* n.sp. (A) Dorsal view of anterior region showing pigmentation of fourth pair of elytra. (B) Head region. (C) Parapodium from middle body. (D-E) Superior neuroseta from anterior segment. (F) Superior neuroseta from middle body segment.

throughout the body, the superior ones having about 7, the inferior ones 4 or 5. Neither slender superior neurosetae in the anterior segments nor giant neurosetae in the posterior region could be found.

In possessing a distinctly papillated occipital flap, *L. guadalcanalis* resembles three other species, namely, *L. michaelsoni* Augener, *L. terrareginae* Monro and *L. mossambica* Day. It differs from the former two species in lacking slender superior neurosetae and in having unidentate neurosetae in the middle segments. *L. guadalcanalis* is close to *L. mossambica*, to which these specimens were provisionally assigned (Gibbs, 1969), but a comparison of the type specimen of *L. mossambica* (in the British Museum, Natural History) has revealed important differences in the structure of the setae. In the middle segments of *L. guadalcanalis* the neurosetae are much stouter, fewer in number and have fewer rows of spinules (7 compared to 10 or 12) than in *L. mossambica* and the presence of small subterminal teeth on the neurosetae of the anterior segments of *L. guadalcanalis* also separates the two species. Furthermore the distinctive coloration of the fourth pair of elytra appears to be a characteristic feature of *L. guadalcanalis*.

HABITAT. A commensal of a large enteropneust (*Balanoglossus carnosus*?) living in silty sand (*Thalassia* flat).

RECORDS. Graham Pt. - 4; Fintry Pt. - 2 (including holotype).

British Museum (Natural History) Registration No. Holotype 1970.25

Paratypes 1970.26-28

Lepidasthenia maculata Potts, 1910

Lepidasthenia maculata Potts, 1910 : 344, pl. 20, fig. 33, pl. 21, fig. 51; Fauvel, 1953 : 58, fig. 27. h-k; Day, 1967 : 92, fig. 1.16. s-v.

HABITAT. In coarse sand, silt and within a tube of *Phyllochaetopterus herdmani*.

RECORDS. Haroro - 1; Tetel Is. - 2.

DISTRIBUTION. North Atlantic; Indian Ocean; Indo-China.

Lepidasthenia microlepis Potts, 1910

Lepidasthenia microlepis Potts, 1910 : 343, pl. 19, fig. 17, pl. 21, fig. 52; Fauvel, 1953 : 57, fig. 26. e-f; Day, 1967 : 90, 1.16. e-h.

HABITAT. A commensal of sipunculids. Hosts include *Siphonosoma vastus* (Selenka & Bülow) living in silty sand (*Thalassia* flat) and *Paraspidosiphon cumingi* (Baird) boring in a *Porites* boulder.

RECORDS. Graham Pt. - 4.

DISTRIBUTION. Tropical Indo-west-Pacific.

***Lepidasthenia stylolepis* Willey, 1907**

Lepidasthenia stylolepis Willey, in Lloyd, 1907 : 260, figs 1-4; Gibbs, 1969 : 453, fig. 134.

HABITAT. A commensal of the sipunculid *Siphonosoma vastus*, living in silty sand (3 out of 7 specimens were discovered in association; hosts were not found for the other 4 specimens).

RECORDS. Graham Pt. - 7.

NOTES. The similarity of *Perolepis regularis* Ehlers and *Lepidasthenia sibogae* Horst to *L. stylolepis* has been referred to in an earlier paper (Gibbs, 1969).

DISTRIBUTION. Persian Gulf; ?East Africa; ?East Indies.

***Lepidonotus (Thormora) jukesi* (Baird, 1865)**

Lepidonotus (Thormora) jukesi: Fauvel, 1953 : 37, fig. 13. o-r; Day, 1967 : 80, fig. 1.13. g-m.

HABITAT. Under coral boulders, in crevices within reef platform, amongst *Phyllochaetopterus socialis* tubes and algal cover (*Amphiroa*) from MTL to LWM.

RECORDS. Tetel Is. - 1; Matiu Is. - 13; Batuona Is. - 17; New Manra - 5; Komimbo Bay - 1; Mamara Pt. - 1; Lingatu - 2; Maramasike Pg. - 3.

DISTRIBUTION. Indo-west-Pacific.

***Paradyte crinoidicola* (Potts, 1910)**

Polynoë crinoidicola Potts, 1910 : 337, pl. 18, fig. 10, pl. 20, fig. 30, pl. 21, figs 39-41.

Scalisetosus longicirrus: Fauvel, 1953 : 50, fig. 22. a-c; Day, 1967 : 58, fig. 1.7. a-f.

Paradyte crinoidicola: Pettibone, 1969 : 13, fig. 7. a-g.

HABITAT. A commensal of crinoids; on *Himerometra robustipinna* (P. H. Carpenter).

RECORDS. Maraunibina Is. - 5 specimens from two hosts.

NOTES. Following Fauvel (1953) and Day (1967) *P. crinoidicola* was previously referred (Gibbs, 1969) to *S. longicirrus* (Schmarda) which Pettibone (1969) considers indeterminable.

DISTRIBUTION. Indo-west-Pacific.

***Paralepidonotus ampulliferus* (Grube, 1878)**

Polynoë ampullifera Grube, 1878 : 35, pl. 3, fig. 5.

Harmothoë ampullifera: Fauvel, 1953 : 43, fig. 18.d; Pillai, 1965 : 117, fig. 3. d-g, fig. 4. a-b.

Paralepidonotus ampulliferus: Horst, 1917 : 76; Day, 1967 : 47, fig. 1.4. a-f.

HABITAT. Undersurface of coral boulder on reef platform.

RECORD. Kalota Is. - 1.

DISTRIBUTION. Tropical Indo-west-Pacific.

***Paralepidonotus indicus* (Potts, 1910)**

Lagisca indica Potts, 1910 : 338, pl. 19, fig. 13, pl. 21, figs 46-47.

Paralepidonotus indicus: Day, 1967 : 48, fig. 1.4. g-k.

HABITAT. Silty sand with coral debris at LWM.

RECORD. Komimbo Bay - 1.

DISTRIBUTION. Moçambique; Maldive Is.

Subfamily **POLYODONTIDAE**

***Polyodontes maxillosus* (Ranzani, 1817)**

Polyodontes maxillosus: Fauvel, 1923 : 97, fig. 37. a-n; 1953 : 71, fig. 32. a-n.

HABITAT. Silty sand with shell and coral fragments at LWM; coarse sand at 18 m depth.

RECORDS. Graham Pt. - 1; Fintry Pt. - 1; ML 204 - 1.

NOTES. Fauvel records that this species may grow to 1 m in length. The largest of the three specimens from the Solomon Islands measures only 12 cm: its felt-like tube had a diameter 1.0 to 1.5 cm and extended to a depth of about 30 cm into the deposit at Graham Pt.

DISTRIBUTION. North Atlantic; Mediterranean; Indian Ocean; Indo-China.

***Polyodontes melanonotus* (Grube, 1876)**

Polyodontes melanonotus: Fauvel, 1953 : 72, fig. 33. c-g; Day, 1967 : 96, fig. 1.17. g-n.

HABITAT. Mud at 11 m; coarse sand at 18 m.

RECORDS. ML 194 - 1; ML 204 - 1.

NOTES. Specimen from ML 194 is 3.5 cm long: it was removed from a tube about 15 cm in length, 1.0 cm in diameter, composed of consolidated mud.

DISTRIBUTION. West Africa; Indo-west-Pacific.

Subfamily **SIGALIONINAE*****Psammolyce zeylanica*** Willey, 1905

Psammolyce zeylanica Willey, 1905 : 255, pls 1-2, figs 33-43; Fauvel, 1953 : 68, fig 31.i.

HABITAT. Silty sand (*Thalassia* flat).

RECORDS. Graham Pt. - 2.

DISTRIBUTION. Ceylon.

Sigalion bandaënsis Horst, 1917

Sigalion bandaënsis Horst, 1917 : 110, pl. 22, figs 4-5.

HABITAT. Under boulder on silty sand with coral debris at LWM.

RECORD. Graham Pt. - 1.

DISTRIBUTION. East Indies; East Australia.

Sthenelais heterochela Horst, 1917

Sthenelais heterochela Horst, 1917 : 113, pl. 23, figs 3-6.

HABITAT. Mud and silty sand, 2-11 m depth.

RECORDS. ML 191 - 1; ML 194 - 1; ML 195 - 1.

DISTRIBUTION. East Indies.

Sthenelais zeylanica Willey, 1905

Sthenelais zeylanica Willey, 1905 : 258, pl. 2, fig. 48; Fauvel, 1953 : 62, fig. 29.a.

HABITAT. Silty sand, MTL to LWM; sand, 5-16 m depth.

RECORDS. Tetel Is. - 1; Komimbo Bay - 4; Graham Pt. - 2; Fintry Pt. - 3; ML 134 - 2; ML 190 - 1.

NOTE. In addition to the two slender stylodes arising from the base of the ventral cirrus, these specimens have a third appendage with a bulb-shaped ending.

DISTRIBUTION. India; Palau Islands.

Sthenelanella ehlersi (Horst, 1916)

Euleanira ehlersi Horst, 1916 : 12; 1917 : 122, pl. 27, figs 1-5; Day, 1967 : 101.

Sthenelanella ehlersi: Pettibone, 1969b : 434, figs 4-5.

HABITAT. Mud and silty sand, 18–24 m depth.

RECORDS. ML 188 – 3; ML 230 – 1.

DISTRIBUTION. Natal; East Indies.

***Sthenolepis japonica* (McIntosh, 1885)**

Leanira japonica McIntosh, 1885 : 154, pl. 22, fig. 3, pl. 14A, figs 1–2; Fauvel, 1953 : 69, fig. 33.a-b.

Sthenolepis japonica: Imajima & Hartman, 1964 : 43; Day, 1967 : 112.

HABITAT. A characteristic species of fine deposits in the sublittoral zone, thick mud to silty sand, 2–33 m depth.

RECORDS. ML 56 – 2; ML 69 – 1; ML 100 – 5; ML 155 – 2; ML 156 – 2; ML 157 – 1; ML 188 – 2; ML 190 – 2; ML 191 – 1; ML 195 – 3; ML 196 – 3; ML 218 – 4; ML 228 – 1.

DISTRIBUTION. Indo-west-Pacific to Japan.

***Thalenessa digitata* McIntosh, 1885**

Thalenessa digitata McIntosh, 1885 : 140, pl. 22, fig. 2, pl. 23, figs 5–7, pl. 25, figs 4–5, pl. 13A, figs 7–10; Willey, 1905 : 260, pl. 2, figs 50–52; Imajima & Hartman, 1964 : 46.

HABITAT. Coarse sand, 2–4 m depth.

RECORDS. ML 203 – 2; ML 296 – 1.

DISTRIBUTION. Ceylon; Admiralty Is.; Japan.

Family **PALMYRIDAE**

***Bhawania goodei* Webster, 1884**

Bhawania cryptocephala Gravier, 1901 : 263, pl. 10, figs 152–156, text-figs 280–285; Fauvel, 1953 : 79, fig. 36. e-i.

Bhawania goodei: Day, 1953 : 407 (synonymy); 1967 : 118, fig. 2.1. a-f.

HABITAT. Cohabiting burrows of coral-boring sipunculids; hosts include *Aspidosiphon elegans* (Chamisso & Eysenhardt), *Cloeosiphon aspergillum* (Quatrefages) and *Phascolosoma albolineatum* (Baird). Also found free-living in crevices and amongst tubes of *Phyllochaetopterus socialis*.

RECORDS. Matiu Is. – 30; New Manra – 5; Mamara Pt. – 1; Maramasike Pg. – 2.

DISTRIBUTION. Circumtropical.

***Bhawania pottsiana* Horst, 1917**

Bhawania cryptocephala: Potts, 1910 : 328.

Bhawania cryptocephala var. *pottsiana* Horst, 1917 : 137.

Bhawania sp.: Gibbs, 1969 : 454.

HABITAT. Sedimented crevices in *Porites* boulders; commensal (?) with *Eurythoe complanata* (see Gibbs, 1969).

RECORDS. Graham Pt. - 2.

NOTES. The larger of the two specimens measures 45 mm in length. Both possess very slender setae with hair-like appendices in the inferior part of the neuropodium, which are not present in *B. goodei*. This additional type of seta was first noticed by Potts (1910) in a specimen from Zanzibar which he attributed to *B. cryptocephala*. However Horst (1917), in recording a similar specimen from the Celebes Is., gave this form varietal status, naming it *B. cryptocephala* var. *pottsiana*. Day (1953) has shown *B. cryptocephala* to be a synonym of *B. goodei*, but since the variety *pottsiana* is quite distinct from its stem species, its subspecific status is here raised to specific rank.

DISTRIBUTION. Zanzibar; East Indies.

***Paleanotus debilis* (Grube, 1855)**

Paleanotus debilis: Day, 1962 : 635 (synonymy); 1967 : 117, fig. 2.1. g-k.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM; on *Halichondria* sp. at 5 m depth.

RECORDS. Matiu Is. - 1; Batuona Is. - 1; Yandina - 2.

DISTRIBUTION. North Atlantic; Mediterranean; Indo-Pacific.

Family AMPHINOMIDAE***Amphinome nigrobranchiata* Horst, 1912**

Amphinome nigrobranchiata Horst, 1912 : 39, pl. 10, figs 17-20.

HABITAT. Under coral boulders; in shell gravel deposits.

RECORDS. Tetel Is. - 2; Graham Pt. - 2; Maraunibina Is. - 1.

DISTRIBUTION. East Indies.

***Chloeia conspicua* Horst, 1910**

Chloeia conspicua Horst, 1910 : 173; 1912 : 20, pl. 7, fig. 5, pl. 8, figs 4-5.

HABITAT. Silty sand at 2 m depth.

RECORD. ML 196 - 1.

DISTRIBUTION. East Indies.

***Euphrosine foliosa* Audouin & Milne-Edwards, 1833**

Euphrosine foliosa: Fauvel, 1923 : 136, fig. 49. a-g; 1953 : 102, fig. 48. a-h.

HABITAT. Under coral boulder at LWM.

RECORD. Maraunibina Is. - 1.

DISTRIBUTION. Atlantic Ocean; Mediterranean; Indo-west-Pacific.

***Euphrosine myrtosa* Savigny, 1818**

Euphrosine myrtosa: Fauvel, 1923 : 139, fig. 49. k-n; 1953 : 101, fig. 48. k-n; Day, 1967 : 127, fig. 3.1.z.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes; sedimented crevice in *Porites* boulder.

RECORDS. Batuona Is. - 1; Graham Pt. - 1.

DISTRIBUTION. West Africa; Mediterranean; Indo-west-Pacific.

***Eurythoë complanata* (Pallas, 1766)**

Eurythoë complanata: Fauvel, 1953 : 83, fig. 38. b-m; Day, 1967 : 128, fig. 3.2. a-h.

HABITAT. A wide variety of situations, including under coral boulders, in crevices in reef platform and in beachrock, in *Acropora* rubble and amongst *Phyllochaetopterus socialis* tubes and *Amphiroa*.

RECORDS. Tetel Is. - 10; Komimbo Bay - 20; Matiu Is. - num.; Batuona Is. - num.; New Manra - 1; Graham Pt. - 6; Maraunibina Is. - 5; Lauvie Is. - 1.

DISTRIBUTION. Circumtropical.

?*Eurythoë* sp.

HABITAT. Under coral boulders in silty sand.

RECORDS. Maraunibina Is. - 4.

NOTES. The specimens measure between 10 and 20 mm long and about 2 mm wide and have 57 to 67 segments. A sinuous caruncle extends through setiger 2

and the branchiae commence between setigers 9 and 13, extending to the posterior end. Notoetae are of three types, namely (i) stout spines, (ii) harpoon setae and (iii) long, fine, smooth capillaries. Neuroetae are of two types – (i) furcate, with a short secondary spur and (ii) long, fine capillaries with faintly serrated blades, some with a stout spur.

The generic identity of these specimens is in question since in the genus *Eurythoe* the branchiae commence on setigers 1–3 (Day, 1967). It is possible that these relatively small specimens are juveniles and because of this, the erection of a new genus must be postponed until further material is available.

Notopygos gregoryi Holly, 1939

Notopygos gregoryi Holly, 1939 : 265, fig. 1. a-f.

HABITAT. Not known.

RECORD. Fanalei – 1.

NOTES. The specimen of this elegant species was collected during the 'palolo' rising at Fanalei between 2000 and 2200 hours on 2.xi.66. It is 160 mm long and 25 mm across the body. All details correspond to the description of the holotype.

DISTRIBUTION. Midway Is. (one specimen).

Notopygos sibogae Horst, 1911

Notopygos sibogae Horst, 1911 : 245; 1912 : 27, pl. 9, figs 4–5.

HABITAT. In *Acropora* rubble; within sedimented crevices on the undersurfaces of *Porites* boulders.

RECORDS. Tetel Is. – 1; Graham Pt. – 3.

NOTES. Hartman (1966) comments that the differences in the specific characters in *Notopygos* i.e. number of segments and the position of the anal pore, may reflect differences in the growth stages. However in all four specimens in the collection of *N. sibogae* the anal pore is situated on the anterior margin of setiger 23 although the lengths vary from 10 to 20 mm.

DISTRIBUTION. East Indies.

Pareurythoe pitipanaensis De Silva, 1965

Pareurythoe pitipanaensis De Silva, 1965 : 540, fig. 3. a-k.

HABITAT. Under coral boulders, in shell gravel and within the interstices of the coral *Galaxea*.

RECORDS. Tetel Is. – 1; Graham Pt. – 5; Maraunibina Is. – 3.

DISTRIBUTION. Ceylon.

Pseudeurythoe paucibranchiata Fauvel, 1932

Pseudeurythoe paucibranchiata Fauvel, 1932 : 47, pl. 1, figs 3-4, text-fig. 8. a-e; 1953 : 86, fig. 39. a-b, fig. 40. a-e.

HABITAT. In silty deposits, particularly under coral boulders; in *Acropora* rubble; in muds and fine sands, 2-26 m depth.

RECORDS. Tetel Is. - 3; Komimbo Bay - 12; Graham Pt. - 7; Maraunibina Is. - 4; ML 37 - 2; ML 41 - 1; ML 68 - 1; ML 96 - 1; ML 110 - 15; ML 134 - 1; ML 156 - 3; ML 157 - 6; ML 194 - 1; ML 195 - 1; ML 218 - 1; ML 228 - 4.

NOTES. Most of the specimens show a button-like caruncle set into the first setiger but some are so contracted that this feature is not visible. Small specimens about 5 mm in length have 4 or 5 pairs of branchiae, whilst in medium-sized specimens up to 10 mm long, the branchiae continue to setiger 16 or 17. The largest specimens come from the littoral zone (Marau Sound); these measure 35 mm long and have branchiae up to setiger 27, as typical for *P. paucibranchiata*.

There is some doubt as to whether all of the specimens in this series should be referred to *P. paucibranchiata* since the position of the prostomium in relation to the first segments and the presence of a caruncle, two major specific characters, are difficult to determine in strongly contracted specimens. Further, the number of branchiae varies greatly with size and cannot be regarded as specific, particularly in small specimens. The setae also are not diagnostic, according to Wesenberg-Lund (1949). On account of these considerations, it seems probable that a number of *Pseudeurythoe* species are synonyms of *P. oculifera* (Augener), the description of which was based on a small, probably juvenile, specimen.

DISTRIBUTION. Indian Ocean; Indo-China.

Family **PHYLLODOCIDAE***Eteone japonensis* McIntosh, 1901

Eteone japonensis McIntosh, 1901 : 222, pl. 1, fig. 2; Imajima & Hartman, 1964 : 60.,

HABITAT. Silty sand.

RECORD. Tetel Is. - 1.

NOTES. The specimen agrees with those details given in the type description and, in addition, possesses a smooth proboscis. However, since the characters of the proboscis in this species are unknown the identification must be regarded as a provisional one.

DISTRIBUTION. Japan Sea.

***Eulalia albopicta* Marenzeller, 1879**

Eulalia albopicta Marenzeller, 1879 : 128, pl. 3, fig. 3; Fauvel, 1953 : 123, fig. 60. a-b.

HABITAT. Cohabiting a *Phyllochaetopterus elioti* tube from silty sand.

RECORD. Fintry Pt. — 1.

DISTRIBUTION. Indian Ocean; Indo-China; Japan.

***Eulalia viridis* (Linnaeus, 1767)**

Eulalia viridis: Fauvel, 1923 : 160, fig. 57. a-h; 1953 : 122, fig. 6.1. a-h; Imajima & Hartman, 1964 : 63.

HABITAT. Crevice in reef platform.

RECORD. Maramasike Pg. — 1.

DISTRIBUTION. Cosmopolitan.

***Eulalia (Pterocirrus) magalhaensis* Kinberg, 1866**

Eulalia (Pterocirrus) magalhaensis: Kinberg 1858-1910 : 55, pl. 33, fig. 1; Fauvel, 1953 : 124, fig. 62. a-h.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes and algal growth (*Amphiroa*) towards LWM.

RECORDS. Cape Esperance — 1; Matiu Is. — 2; Batuona Is. — 1; New Manra — 1.

NOTE. All five specimens are small-sized (3 to 7 mm) but conform to the species description.

DISTRIBUTION. Indo-Pacific.

***Notophyllum splendens* (Schmarda, 1861)**

Macrophyllum splendens Schmarda 1861 : 82, pl. 29, fig. 227.

Notophyllum splendens: Fauvel, 1953 : 126, fig. 60. c; Day, 1967 : 151, fig. 5.3. k-n.

HABITAT. Under coral boulder; interstices of the coral *Galaxea*.

RECORDS. Graham Pt. — 2.

DISTRIBUTION. Indo-west-Pacific.

***Phyllodoce fristedti* Bergström, 1914**

Phyllodoce fristedti: Fauvel, 1953 : 118, fig. 58. a-b; Day, 1967 : 147, fig. 5.2. k-m.

HABITAT. Crevices in reef platform and beachrock.

RECORDS. Matiu Is. — 1; Lauvie Is. — 1.

DISTRIBUTION. Indian Ocean.

***Phyllodoce malmgreni* Gravier, 1900**

Phyllodoce malmgreni Gravier, 1900 : 207, pl. 10, figs 29-31, text-figs 66-69; Fauvel, 1953 : 117, fig. 56. h; Day, 1967 : 147, fig. 5.2. n-p.

HABITAT. Silty sand at MTL; mud at 2 m depth.

RECORDS. Tetel Is. - 2; ML 68 - 1.

DISTRIBUTION. Indian Ocean; East Australia.

***Phyllodoce pruvoti* Fauvel, 1930**

Phyllodoce pruvoti Fauvel 1930 : 512, fig. 1. a-f, fig. 2. a-c; 1947 : 28, fig. 23.

HABITAT. Crevices in reef platform; amongst *Phyllochaetopterus socialis* tubes.

RECORDS. Matiu Is. - 1; Batuona Is. - 1; New Manra - 1.

DISTRIBUTION. Tropical West Pacific.

***Phyllodoce quadraticeps* Grube, 1878**

Phyllodoce quadraticeps Grube, 1878 : 98, pl. 6, fig. 2; Fauvel, 1953 : 116, fig. 56. f-j; Day, 1967 : 145, fig. 5.2. h-j.

HABITAT. Crevices in reef platform and in beachrock, MTL to LWM.

RECORDS. Kokomtambu Is. - 1; Matiu Is. - 10; Lauvie Is. - 1.

NOTE. This species is often found crawling over the surface of exposed coral during the low-tide period.

DISTRIBUTION. Tropical Indo-west-Pacific.

***Phyllodoce (Anaitides) madeirensis* Langerhans, 1880**

Phyllodoce (Anaitides) madeirensis: Fauvel, 1953 : 120, fig. 59. d-h; Day, 1967 : 145, fig. 5.2. d-g.

HABITAT. In *Acropora* rubble, under coral boulders and in beachrock crevices.

RECORDS. Komimbo Bay - 2; Lauvie Is. - 2; Graham Pt. - 2; Fanalei - 3.

NOTES. The Fanalei specimens were collected between 1830 and 1900 hours during the 'palolo' rising on 2.xi.66 and are 'spent'. Local name is 'adio'.

DISTRIBUTION. Cosmopolitan.

***Phyllodoce (Anaitides) parva* (Hartmann – Schröder, 1965)**

Anaitides parva Hartmann – Schröder, 1965 : 88, figs 7–9; Hartman, 1966 : 183.

HABITAT. Medium sand at 5 m.

RECORD. ML 190 – 1.

DISTRIBUTION. Hawaii.

***Phyllodoce (Genetyllis) castanea* (Marenzeller, 1879)**

Carobia castanea Marenzeller, 1879 : 127, pl. 3, fig. 2; Izuka, 1912 : 199, pl. 21, fig. 3.

Phyllodoce (Genetyllis) castanea: Fauvel, 1953 : 115, fig. 56. a-c; Day, 1967 : 149, fig. 53. d-f.

HABITAT. Sand at 11 m.

RECORD. ML 98 – 1.

DISTRIBUTION. Indo-west-Pacific.

***Phyllodoce (Genetyllis) gracilis* Kinberg, 1866**

Phyllodoce gracilis: Kinberg, 1858–1910 : 55, pl. 22, fig. 3; Monro, 1939 : 173, fig. 3. a-c; Fauvel, 1953 : 117, fig. 57. a-g.

HABITAT. Crevice in reef platform.

RECORD. Lingatu – 1.

DISTRIBUTION. Tropical Indo-Pacific.

Family **PILARGIDAE**

***Sigambra hanaokai* (Kitamori, 1960)**

Ancistrotyllis hanaokai Kitamori, 1960a : 1086, fig. 1. a-h.

Sigambra hanaokai: Pettibone, 1966 : 181 (synonymy).

HABITAT. Mud, 2–20 m depth.

RECORDS. ML 39 – 3; ML 40 – 1; ML 41 – 10; ML 68 – 5; ML 157 – 1.

NOTES. Larger specimens – up to 14 mm in length – were found inhabiting thin membraneous tubes covered in mud particles.

DISTRIBUTION. Japan.

Synelmis albin (Langerhans, 1881)

Ancistrosyllis rigida Fauvel, 1919 : 337, fig. 1. a-e; 1953 : 110, fig. 53. a-e; Day, 1967 : 215.

Synelmis albin: Pettibone, 1966 : 191, figs 19-21 (synonymy).

HABITAT. Crevices in reef platform; amongst *Phyllochaetopterus socialis* tubes; in shell gravel and coarse sand.

RECORDS. Komimbo Bay - 2; Matiu Is. - 1; Batuona Is. - 4; Mamara Pt. - 1; Graham Pt. - 1; Maramasike Pg. - 1.

DISTRIBUTION. Circumtropical.

Family **HESIONIDAE*****Gyptis capensis*** (Day, 1963)

Oxydromus capensis Day, 1963 : 397, fig. 4. e-j.

Gyptis capensis: Day, 1967 : 231, fig. 11.2. l-o.

HABITAT. Under coral boulders on silty sand, MTL to LWM.

RECORDS. Maraunibina Is. - 3.

NOTES. A complete specimen measures 15 mm in length for about 70 segments. Notosetae are present from setiger 5.

DISTRIBUTION. South Africa.

Gyptis maraunibinae n. sp.

(Fig. 5. A-F)

DISTRIBUTION. The holotype is 45 mm long for 150 segments and the body is about 3 mm wide.

The prostomium is rectangular, its width being about 1.5 times the length (fig. 5. A). Three antennae arise from the anterior margin of the prostomium; the laterals are about twice the length of the median. The two biarticulate palps, each composed of a short palpostyle and longer palpophore, are stouter and slightly longer than the lateral antennae. There are two pairs of eyes and those of the anterior pair are reniform in shape and are larger than those of the posterior pair. The proboscis carries ten papillae, each of which is broad and flap-like (fig. 5. B). Jaws are lacking, but there is a horny rim around the ventral and ventro-lateral margins of the proboscis.

The tentacular cirri number eight pairs and each is faintly but closely annulated. The dorsal pair of the second segment is the longest, reaching back to about setiger 15.

The first 4 or 5 setigers are uniramous, becoming biramous when a notopodial papilla appears on the antero-ventral side of the cirrophore from about setiger 6. The notopodia are small throughout the length of the body but the neuropodia are well developed, each with a pointed pre-setal lip and a rounded post-setal lip (fig. 5. C). Ventral cirri are about equal to the neuropodial lobe in length. In the middle of the body, notosetae include 2 or 3 rather stout, smooth spines (fig. 5. E) and 4 or 5 forked setae (fig. 5. D); neurosetae are falcigerous, each with a minutely serrated blade of varying length and with a bidentate tip consisting of a strong terminal tooth and a slender secondary one (fig. 5. F).

The large, lobular, papillae on the proboscis are sufficient to distinguish *G. maraunibinae* from other *Gyptis* species. In other details the species resembles *G. capensis* (Day).

HABITAT. Silty sand with shell gravel below coral boulder on reef platform.

RECORD. Graham Pt. - 1.

British Museum (Natural History) Registration No. Holotype 1970.29

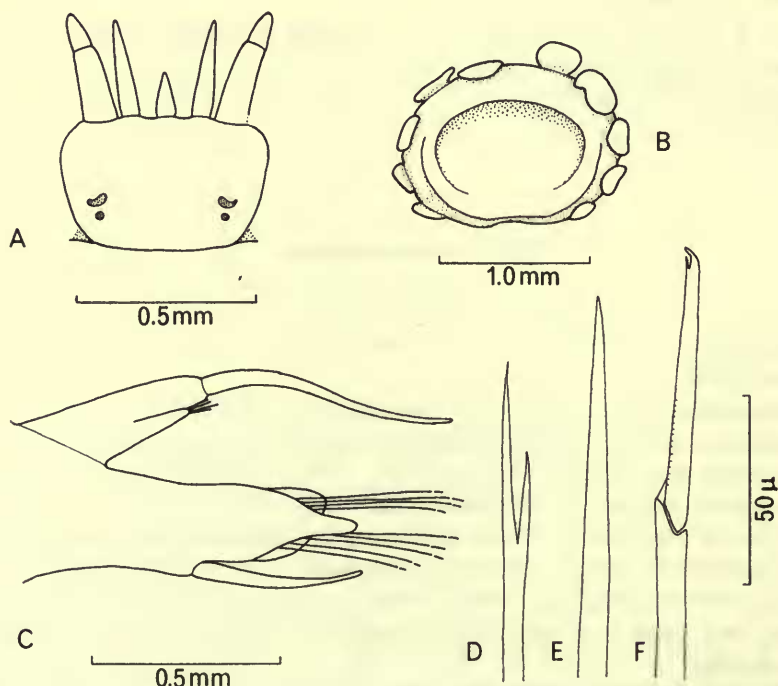


FIG. 5. *Gyptis maraunibinae* n.sp. (A) Dorsal view of prostomium. (B) Anterior view of proboscis. (C) Parapodium from middle body. (D-E) Notopodial forked seta and spine. (F) Neuropodial falciger.

***Hesione splendida* Savigny, 1818**

Hesione pantherina: Fauvel, 1953 : 104, fig. 49. a-g.

Hesione splendida: Day, 1967 : 228, fig. 11.2. a-c.

HABITAT. In *Acropora* rubble and shell gravel; in crevices and under coral boulders.

RECORDS. Honiara - 1; Komimbo Bay - 1; Graham Pt. - 14.

DISTRIBUTION. North Atlantic; Mediterranean; Indo-west-Pacific.

***Leocrates chinensis* Kinberg, 1866**

Leocrates clapedii: Fauvel, 1953 : 106, fig. 50. c-g; Day, 1967 : 230, fig. 11.2. g-k.

Leocrates chinensis: Imajima & Hartman, 1964 : 82 (synonymy).

HABITAT. In shell gravel and *Acropora* rubble; under coral boulders.

RECORDS. Kokomtambu Is. - 1; Tetel Is. - 4; Komimbo Bay - 1; Fintry Pt. - 1; Maramasike Pg. - 1.

DISTRIBUTION. West Africa; Mediterranean; tropical Indo-west-Pacific.

Family SYLLIDAE

The species listed below for this family were identified by Dr. Minoru Imajima. A detailed account of this material will be published by Dr. Imajima at a later date.

Subfamily AUTOLYTINAE***Autolytus* sp.**

HABITAT. On sponge *Halichondria* sp. at 5 m depth.

RECORD. Yandina - 1 (damaged).

Subfamily EXOGONINAE***Brania clavata* (Claparède, 1863)**

Grubea clavata: Fauvel, 1923 : 296, fig. 114 a-e.

Brania clavata: Imajima, 1966 : 393, fig. 1 a-g.

HABITAT. Coarse sand at LWM.

RECORD. Komimbo Bay - 1.

DISTRIBUTION. North Atlantic; Mediterranean; Japan.

***Exogone gemmifera* Pagenstecher, 1862**

Exogone gemmifera: Fauvel, 1923 : 305, fig. 117. a-d; Imajima, 1966 : 397, fig. 2. a-h; Day, 1967 : 274, fig. 12.10. p-u.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORD. Matiu Is. - 1.

DISTRIBUTION. North Atlantic; South Africa; Mediterranean; Japan; northern North Pacific.

***Exogone uniformis* Hartman, 1961**

Exogone uniformis Hartman, 1961 : 73, pl. 6, fig. 1, pl. 7, figs 1-4; Imajima, 1966 : 400, fig. 4. a-j.

HABITAT. Coarse sand and silty fine coral sand at LWM.

RECORDS. Komimbo Bay - 1; Matiu Is. - 1.

DISTRIBUTION. Southern California; Japan.

***Exogone verugera* (Claparède, 1868)**

Exogone verugera: Fauvel, 1923 : 307, fig. 117. m-r; Imajima, 1966 : 399, fig. 3. a-h; Day, 1967 : 272, fig. 12.10. g-l.

HABITAT. On *Eunice tubifex* tube at LWM; on sponge *Halichondria* sp. at 5 m depth.

RECORDS. Tetel Is. - 1; Yandina - 1.

DISTRIBUTION. North Atlantic; Mediterranean; South Africa; S.W. and E. Australia; North Pacific.

***Sphaerosyllis hirsuta* Ehlers, 1897**

Sphaerosyllis hirsuta Ehlers, 1897 : 48, pl. 3, figs 58-60; Imajima & Hartman, 1964 : 117, pl. 27, figs f-l; Imajima, 1966 : 404.

HABITAT. Coarse sand at LWM; on *Eunice tubifex* tube at LWM.

RECORDS. Komimbo Bay - 1; Tetel Is. - 1.

DISTRIBUTION. Northern North Pacific; Japan; Australia; New Zealand; southern South America.

Subfamily SYLLINAE

Haplosyllis spongicola (Grube, 1855)

Syllis (*Haplosyllis*) *spongicola*: Fauvel, 1923 : 257, fig. 95. a-d; 1953 : 147, fig. 75. a-d; Day, 1967 : 240, fig. 12.1. e-i.

Haplosyllis spongicola: Imajima, 1966a : 220, fig. 38. a-h.

HABITAT. Abundant in sponges – *Neofolitispa dianchora* and *Halichondria* sp. – from 5 m depth.

RECORDS. Yandina – num.

DISTRIBUTION. Cosmopolitan in tropical and temperate waters.

Langerhansia cornuta (Rathke, 1843)

Syllis (*Ehlersia*) *cornuta*: Fauvel, 1923 : 267, fig. 100 g-i; 1953 : 153, fig. 79. g-i.

Syllis (*Langerhansia*) *cornuta*: Day, 1967 : 244, fig. 12.2. s-u.

Langerhansia cornuta: Imajima, 1966b : 256, fig. 51. a-o.

HABITAT. Coarse sand, silt; on sponge *Halichondria* sp. at 5 m depth.

RECORDS. Tetel Is. – 3; Komimbo Bay – 19; Yandina – 1.

DISTRIBUTION. Atlantic; Indo-Pacific.

Langerhansia ?rosea (Langerhans, 1879)

Langerhansia rosea: Imajima, 1966b : 259, fig. 52. a-m.

HABITAT. On serpulid tubes at MTL; coarse sand at LWM.

RECORDS. Tetel Is. – 1; Komimbo Bay – 2.

Syllis longissima Gravier, 1900

Syllis longissima Gravier, 1900 : 154, pl. 9, fig. 7, text-figs. 17–23; Day, 1967 : 243, fig. 12.2. f-i

HABITAT. Crevices in reef platform; amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORDS. Matiu Is. – 8; New Manra – 1; Lingatu – 3.

NOTE. This appears to be the first record of *S. longissima* in the west Pacific region.

DISTRIBUTION. Red Sea; Persian Gulf; west coast of South America.

***Syllis* sp. cf. *gracilis* Grube, 1840**

Syllis gracilis: Fauvel, 1923 : 259, fig. 96. f-i; 1953 : 147, fig. 73. f-i; Imajima, 1966a : 248, fig. 49. a-k; Day, 1967 : 241, fig. 12.1. m-p.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM; on sponge *Halichondria* sp. at 5 m depth.

RECORDS. Batuona Is. - 3; Yandina - 1.

***Trypanosyllis coeliaca* Claparède, 1868**

Trypanosyllis coeliaca: Fauvel, 1923 : 270, fig. 101. f-h.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORD. Batuona Is. - 1.

NOTE. Previous records of *T. coeliaca* are confined to western Europe and the Mediterranean Sea.

DISTRIBUTION. North Atlantic; Mediterranean.

***Trypanosyllis (Trypanedenta)* sp.**

HABITAT. Crevices in beachrock at LWM.

RECORDS. Lauvie Is. - 3.

***Typosyllis alternata* (Moore, 1908)**

Typosyllis alternata: Imajima, 1966b : 273, fig. 58. a-l.

HABITAT. Chiefly amongst *Phyllochaetopterus socialis* tubes; under boulders and in crevices in reef platform; on sponge *Neofolitispa dianchora* at 5 m depth.

RECORDS. Tetel Is. - 2; Matiu Is. - 5; Cape Esperance - 3; Batuona Is. - 6; Yandina - 3.

DISTRIBUTION. Japan; East Indies; west coast of North America.

***Typosyllis armillaris* (Müller, 1776)**

Syllis (Typosyllis) armillaris: Fauvel, 1923 : 264, fig. 99. a-f; Day, 1967 : 249, fig. 12.4. a-d.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORDS. Batuona Is. - 2.

DISTRIBUTION. Cosmopolitan.

***Typosyllis brachycola* (Ehlers, 1897)**

Syllis brachycola Ehlers, 1897 : 38, pl. 2, figs 46-47.

Syllis (Typosyllis) brachycola: Augener, 1924 : 362.

HABITAT. Below boulders in silty sand; amongst *Phyllochaetopterus socialis* tubes; interstices of coral *Galaxea*.

RECORDS. Tetel Is. - 1; Naro Bay - 2; Batuona Is. - 3; Graham Pt. - 2.

NOTE. *T. brachycola* is widely distributed in the southern temperate and sub-arctic regions but this appears to be the first record from tropical waters.

DISTRIBUTION. Southern South America; New Zealand.

***Typosyllis exilis* (Gravier, 1900)**

Syllis (Typosyllis) exilis Gravier, 1900 : 160, pl. 9, fig. 9, text-figs 28-30; Day, 1967 : 250, fig. 12.4. h-j.

HABITAT. Crevice in reef platform at MTL.

RECORD. Mamara Pt. - 1.

DISTRIBUTION. Indo-west-Pacific to Gambier Islands.

***Typosyllis lucida* (Chamberlin, 1919)**

Pionosyllis lucida Chamberlin, 1919 : 8.

Typosyllis lucida: Hartman, 1968 : 489.

HABITAT. Crevices in reef platform.

RECORDS. Kokomtambu Is. - 1; Matiu Is. - 2.

NOTE. This species has not been recorded since it was first described by Chamberlin from Laguna Beach, California.

DISTRIBUTION. Southern California.

***Typosyllis prolifera* (Krohn, 1852)**

Syllis (Typosyllis) prolifera: Fauvel, 1923 : 261, fig. 97. a-g; 1953 : 149, fig. 74. a-g; Day, 1967 : 248, fig. 12.3. g-i.

Typosyllis prolifera: Imajima, 1966b : 292, fig. 65. a-n.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM; on sponge *Hali-chondria* sp. at 5 m depth.

RECORDS. Batuona Is. - 1; Yandina - 2.

DISTRIBUTION. North Atlantic; Mediterranean; South Africa; Indo-west-Pacific.

***Typosyllis* sp.**

HABITAT. On sponge *Halichondria* sp. at 5 m depth.

RECORD. Yandina - 1.

Family **SPHAERODORIDAE*****Sphaerodoridium clapedii*** (Greeff, 1866)

Sphaerodorum clapedii: Fauvel, 1923 : 379, fig. 149. d-e.

Sphaerodoridium clapedii: Lützen, 1961 : 415.

HABITAT. On sponge *Halichondria* at 5 m depth.

RECORD. Yandina - 1.

NOTES. This specimen was overlooked during the primary sorting of a collection of polychaetes from sponges and was included in a large sample of syllids sent to Dr. M. Imajima who kindly identified it. This record considerably extends the known distribution of *S. clapedii* which hitherto was recorded only from western Europe.

DISTRIBUTION. European waters.

Family **NEREIDAE**Subfamily **NAMANEREINAE*****Cryptonereis* n. gen.**

Small nereids that are generally similar to *Namanereis* but which lack frontal antennae. Prostomium with two pairs of eyes and two biarticulate palps. Proboscis without paragnaths but with a pair of toothed jaws. Peristomium with three pairs of tentacular cirri but not parapodia. Parapodia are sesquiramous throughout, each lacking a notopodial lobe but with a notopodial aciculum. Superior neuropodial setae are spinigerous, the rest being falcigerous. At maturity, parapodia become biramous with the development of capillary setae.

TYPE SPECIES. *Cryptonereis malaitae* Gibbs.

***Cryptonereis malaitae* n. gen. n. sp.**

Fig. 6. (A-F)

DESCRIPTION. Larger specimens measure between 10 and 15 mm long for 55 to 65 segments and are about 2 mm wide.

The prostomium is rounded, roughly semi-circular in shape, with two pairs of eyes

and two biarticulate palps with broad palpophores. Frontal antennae are lacking (fig. 6. A). The peristomium carries three pairs of short tentacular cirri; on each side two cirri are attached to a short base which is ventro-lateral in position and the third cirrus arises dorso-laterally on the peristomium (fig. 6. B). The proboscis lacks paragnaths but carries a pair of brown jaws, each with 9 or 10 teeth and a thin internal guard (fig. 6. C).

The parapodia are sesquiramous in immature individuals, becoming biramous over most of the body when mature (see below). Notopodial lobes are lacking but black notopodial as well as neuropodial acicula persist (fig. 6. D). Neuropodia are bilobed with pointed pre-setal and rounded post-setal lips. The dorsal cirri are short and stout and the ventral cirri are very small.

The neuropodial setae consist of one or two spinigers with minutely serrated blades (fig. 6. E) and four or five falcigers with short ciliated blades (fig. 6. F). The shaft and blade of the superior falciger often appear to be fused but the articulations of the other falcigers are usually distinct.

Most of the specimens appear to be approaching maturity and, on preservation, gametes have been released from the parapodia at points just above the dorsal cirri.

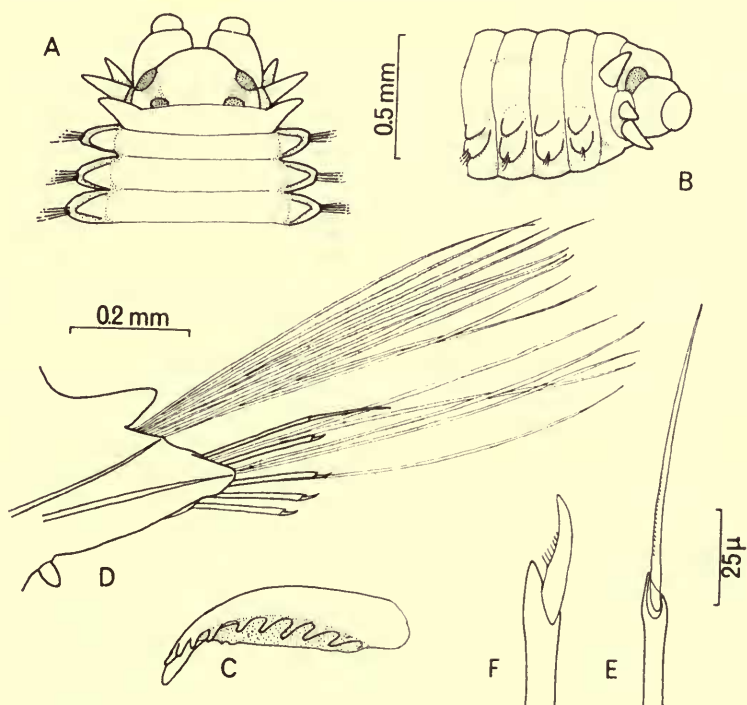


FIG. 6. *Cryptonereis malaitae* n.gen., n.sp. (A-B) Dorsal and lateral views of anterior region. (C) Left jaw in ventral view. (D) Parapodium from middle body of mature specimen. (E) Spiniger. (F) Falciger.

In these specimens, long, slender capillary setae are present in both rami of the parapodia from setigers 8 or 9 to the last few segments. In some, these capillary setae are short and few in number but in others, probably at a more advanced stage of maturity, they are very much longer, being about three times the length of the falcigers. In the latter specimens, each parapodium has a compact notopodial bundle, composed of about 20 capillaries, arising from between the dorsal cirrus and the notopodial aciculum, and a further 8 to 10 capillaries appear amongst the neurosetae (fig. 6. D). The specimen chosen for the holotype shows this condition.

In the collection there is an immature individual which is only 6.5 mm long for 35 segments (incomplete). This specimen does not possess the capillary setae found in the larger specimens. It is thought therefore that *C. malaitae* has an epitokous phase at maturity in which capillary (or natatory) setae (recalling those that are formed in the epitokes of some Syllidae) are developed and that the majority of the type specimens, collected on 20.xi.65, are approaching, or at, this stage of development.

C. malaitae is apparently dioecious. The oocytes are yolky and those released on preservation by the females vary greatly in size but are mainly between 100 to 150 μ in diameter. Spermatozoa are recognizable in the coelomic contents of the more mature males. In life, specimens are purplish but assume a brownish colour in alcohol.

It seems inadvisable to enlarge the generic description of the relatively well-known and widespread genus *Namanereis* Chamberlin (see Hartman, 1959a) to include those forms which lack frontal antennae, hence the need to erect a new genus. Apart from its lacking frontal antennae and also its possession of capillary setae at maturity, *Cryptonereis* closely resembles *Namanereis* and the relationship between these two genera parallels that between *Micronereis* Claparède and *Micronereides* Day in terms of the presence or absence of antennae.

HABITAT. Between the fibres composing a leaf frond of the coconut palm found stranded at about MTL.

RECORDS. Alite Harbour, Langa-Langa Lagoon (Malaita) – 14.

British Museum (Natural History) Registration No. Holotype 1970.30

Paratypes 1970.31

NOTES. It is difficult to decide whether the habitat of *C. malaitae* is marine or, like many other *Namanereinae*, damp-terrestrial since either is possible, depending on the period of time the leaf frond had been immersed in seawater. Interestingly, further specimens of this, or a closely related species, were collected by the Expedition Land Party (Mr. J. Peake and Dr. J. Greenslade) in moist leaf litter at an altitude of about 350 m at two separate localities, namely Betimatu on Mt. Austen, Guadalcanal and on Kolombangara in the New Georgia Group. This material consists of two specimens (one incomplete and the other dried) both about 5 mm long and resembling immature *C. malaitae* in detail. However in both specimens the prostomium is damaged and because the presence or absence of frontal antennae cannot be determined their identity must remain in question. It is possible that these two

specimens could be *Namanereis amboinensis* (Pflugfelder, 1933, as *Lycastopsis amboinensis*) which resembles the immature stage of *C. malaitae* in all details but possesses antennae.

***Namalycastis indica* (Southern, 1921)**

Lycastis indica Southern, 1921 : 578, pl. 19, fig. 2. a-j, text-fig. 2. a-d.

Namalycastis indica: De Silva, 1965a : 5, fig. 2. a-e; Day, 1967 : 301, 14.2. p-s.

HABITAT. Burrowing within the fibrous husks of *Nipa* palm nuts immersed in brackish water (5.6‰).

RECORD. Lagoon at the mouth of the Lunga R. at Lunga Pt. – 12.

NOTES. *N. indica* was found only in those *Nipa* nuts which were waterlogged, lying along and just below the water-line of the swamp. The largest specimen is 60 mm long.

DISTRIBUTION. Indian Ocean.

Subfamily NEREINAE

***Ceratonereis costae* (Grube, 1840)**

Ceratonereis costae: Fauvel, 1923 : 349, fig. 136. a-f; 1953, 194, fig. 98. a-f; Day, 1967 : 325, fig. 14.10. h-l.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes; on *Halichondria* sp. at 5 m depth.

RECORDS. Batuona Is. – 1; Yandina – 1.

DISTRIBUTION. North Atlantic; Mediterranean; Indo-west-Pacific.

***Ceratonereis erythraeënsis* Fauvel, 1918**

Ceratonereis erythraeënsis Fauvel, 1918 : 505, fig. 2. a-k; Day, 1967 : 327, fig. 14.10. o-t.

HABITAT. Muddy silt under boulders at MTL.

RECORDS. Naro Bay – 20.

DISTRIBUTION. Indian Ocean; East Australia; Japan.

***Ceratonereis mirabilis* Kinberg, 1866**

Ceratonereis mirabilis: Gravier, 1901 : 172, pl. 11, fig. 42; Fauvel, 1953 : 200, fig. 103. a-c; Day, 1967 : 324, fig. 14.10. a-g.

HABITAT. Silty sand under boulders; in *Acropora* rubble; within interstices of *Galaxea*; on *Halichondria* sp. at 5 m depth.

RECORDS. Tetel Is. - 2; Komimbo Bay - 1; Graham Pt. - 2; Yandina - 3.

DISTRIBUTION. Circumtropical.

***Nereis (Neanthes) caudata* (Delle Chiaje, 1825)**

Nereis cricognatha: Fauvel, 1953 : 180, fig. 91. a-c.

Nereis (Neanthes) arenaceodonta: Pettibone, 1963 : 162, figs 44.i, 45.e.

Nereis (Neanthes) caudata: Day, 1967 : 321, fig. 14.9. f-j.

HABITAT. Under coral boulder in muddy silt; sand at 5 m depth.

RECORDS. Komimbo Bay - 1; ML 229 - 1.

DISTRIBUTION. Cosmopolitan.

***Nereis (Neanthes) unifasciata* Willey, 1905**

Nereis (Neanthes) unifasciata Willey, 1905 : 271, pl. 4, figs 85-88; Fauvel, 1953 : 182, 92. a-h; Day, 1967 : 318, fig. 14.7. u-y.

HABITAT. Under coral boulder; in beachrock.

RECORDS. Komimbo Bay - 1; Lauvie Is. - 1.

DISTRIBUTION. Tropical Indo-west-Pacific.

***Nereis (Neanthes) sp. cf. kerguelensis* McIntosh, 1885**

Nereis kerguelensis McIntosh, 1885 : 225, pl. 35, figs 10-12, pl. 16A, figs 17-18.

HABITAT. Silty sand in crevice of *Porites* boulder.

RECORD. Graham Pt. - 1.

NOTES. The specimen corresponds to *N. kerguelensis* in all details except that the notopodia of the anterior segments lack intermediate pre-setal lobes, giving a bilobed, not tri-lobed structure.

Perinereis cultrifera (Grube, 1840)

(Fig. 7. A)

Perinereis cultrifera: Fauvel, 1923 : 352, fig. 137. a-l; 1953 : 206, fig. 106. a-l; Day, 1967 : 337, fig. 14.13. o-q.

HABITAT. Chiefly under coral boulders on sand at MTL; also in crevices in reef platform and in beachrock.

RECORDS. Kokomtambu Is. - 1; Tetel Is. - 3; Matiu Is. - 6; New Manra - 32; Maraunibina Is. - 4; Lauvie Is. - 1; Graham Pt. - 4; Yandina - 1; Fanalei - 2 (heteronereids).

NOTES. Two female heteronereid stages of this species are included in the collection made during the 'palolo' rising at Fanalei on 2.xi.66 (local name - 'falisi ugu'). They were taken between 2000 and 2200 hours and correspond to the description of this stage given by Izuka (1912) and Fauvel (1923) except that lower ligule of the notopodium in the modified parapodium has a small ear-shaped lobe arising from its ventral margin (fig. 7. A). These specimens measure 45 and 52 mm long for 116 and 225 segments respectively, with the modified parapodia commencing at setigers 20 to 22.

DISTRIBUTION. Cosmopolitan.

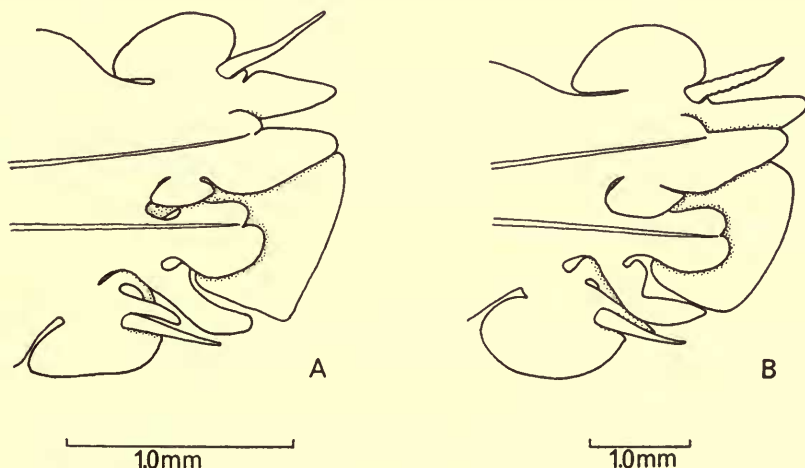


FIG. 7. *Perinereis cultrifera* (A) Modified parapodium of heteronereid (♀) stage (setae omitted). *Perinereis nuntia* (B) Modified parapodium of heteronereid (♂) stage (setae omitted).

***Perinereis nigropunctata* (Horst, 1889)**

Nereis (*Perinereis*) *nigro-punctata* Horst 1889 : 171, pl. 8, figs 1-3; 1924 : 171.

Perinereis nigro-punctata: Fauvel, 1953 : 210, fig. 107. b-f; Day, 1967 : 337, fig. 14.13. 1-v.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes; under coral boulders; abundant in beachrock.

RECORDS. Batuona Is. - 2; Graham Pt. - 2; Lauvie Is. - num.

DISTRIBUTION. Tropical Indo-west-Pacific.

***Perinereis nuntia* (Savigny, 1818)**

(Fig. 7. B)

Perinereis nuntia: Fauvel, 1953 : 212, fig. 109. a-g; Day, 1967 : 334, fig. 14.12. p-s.

HABITAT. Chiefly found under boulders lying on clean sand and gravel at MTL.

RECORDS. Haroro - 3; Tetel Is. - 3; Cape Esperance - 17; Matiu Is. - 2; New Manra - 3; Mouth of Lunga R. - 4; Yandina - 50; Honiara - 20; Vera Vera Entrance - 1 (heronereid (♂)).

NOTES. In these specimens there are 1 to 3 paragnaths in group 1 and the paragnaths of group VI are usually flattened, sometimes mixed with conical forms. However the number of paragnaths in group V is very variable: for example, in the sample of 50 individuals from the Yandina population, one specimen has four paragnaths in group V, 26 have three arranged in a triangle, 11 have two and 12 have only one. Thus in terms of the subspecific forms (see Fauvel, 1953) *Perinereis nuntia brevicirrus* composes about half the population and *P. nuntia vallata* about a quarter, the remaining quarter being intermediate in character between these two forms.

The male heteronereid stage of *P. nuntia brevicirrus* was captured swimming near the surface at Vera Vera Entrance on 8.xi.65 at 1500 hours. It measures 90 mm long for about 150 segments, the modification of the parapodia starting between setigers 23 to 27. The structural details of the modified parapodium (fig. 7. B) follow those described and figured by Izuka (1912, as *N. mictodonta*).

DISTRIBUTION. South Africa; Indo-Pacific.

***Platynereis insolita* Gravier, 1901**

Platynereis insolita Gravier 1901 : 197, pl. 12, fig. 53, text-figs 203-206; Day, 1967 : 307, fig. 14.4.1.

HABITAT. Under coral boulder; amongst *Phyllochaetopterus socialis* tubes and *Amphiroa* growth.

RECORDS. Matiu Is. - 1; Komimbo Bay - 1; New Manra - 2.

DISTRIBUTION. Indian Ocean.

***Pseudonereis anomala* Gravier, 1901**

Pseudonereis anomala Gravier, 1901 : 191, pl. 12, figs 50-52, text-figs 194-202; Fauvel, 1953 : 217, fig. 110. e-g; Day, 1967 : 333, fig. 14.12. g-j.

HABITAT. Abundant amongst *Phyllochaetopterus socialis* tubes and *Amphiroa*; burrowing in reef platform and beachrock.

RECORDS. Mamara Pt. - 1; Batuona Is. - num.; New Manra - num.; Yandina - 6; Maramasike Pg. - 3.

DISTRIBUTION. Indo-Pacific.

***Pseudonereis masalacensis* (Grube, 1878)**

Nereis (Lycoris) masalacensis Grube, 1878 : 75, pl. 5, fig. 4.

Pseudonereis masalacensis: Fauvel, 1947 : 51, fig. 49. a-k.

HABITAT. Under coral boulders on sand at MTL; amongst *Phyllochaetopterus socialis* tubes and algal growth (*Amphiroa*).

RECORDS. Batuona Is. - 2; New Manra - 3; Yandina - 2.

DISTRIBUTION. West and South Pacific.

***Pseudonereis variegata* (Grube, 1857)**

Pseudonereis gallapagensis: Fauvel, 1953 : 215, fig. 110. a-c.

Pseudonereis variegata: Day, 1967 : 331, fig. 14.12. a-f.

HABITAT. Burrowing in reef platform and beachrock; amongst *Amphiroa*; under boulders on clean sand.

RECORDS. Matiu Is. - 8; Sifola - 8; New Manra - 2; Lauvie Is. - 3; Yandina - 2.

DISTRIBUTION. Circumtropical.

***Solomononereis* n. gen.**

Prostomium with two antennae, two biarticulate palps and two pairs of eyes. Peristomium with four pairs of tentacular cirri, dorsal pairs long, ventral pairs much shorter. Proboscis with small, rod-like chitinous paragnaths arranged in eight discrete groups on the maxillary ring; oral ring without paragnaths. Parapodia biramous with spinigerous setae in both rami throughout the body; falcigerous setae in both rami in the middle and posterior segments.

TYPE SPECIES. *Solomononereis marauensis* Gibbs

Solomononereis marauensis n. gen. n. sp.

(Fig. 8. A-H)

DESCRIPTION. The holotype measures 45 mm for 123 segments and is incomplete posteriorly. The largest of the three paratypes is 40 mm for 157 segments. The width of the body is about 3 mm.

The prostomium is rectangular in shape with two short, widely spaced antennae, two pairs of eyes, and a pair of palps with stout palpophores, often with a constriction just below the tip, and small palpostyles (fig. 8. A). The peristomium is weakly developed and is present as a narrow band on the dorsal surface but does not form a distinct ring ventrally. Of the four pairs of tentacular cirri, the two dorsal pairs are very long, extending back as far as setiger 20 but the ventral pairs are short, reaching to setiger 3 only.

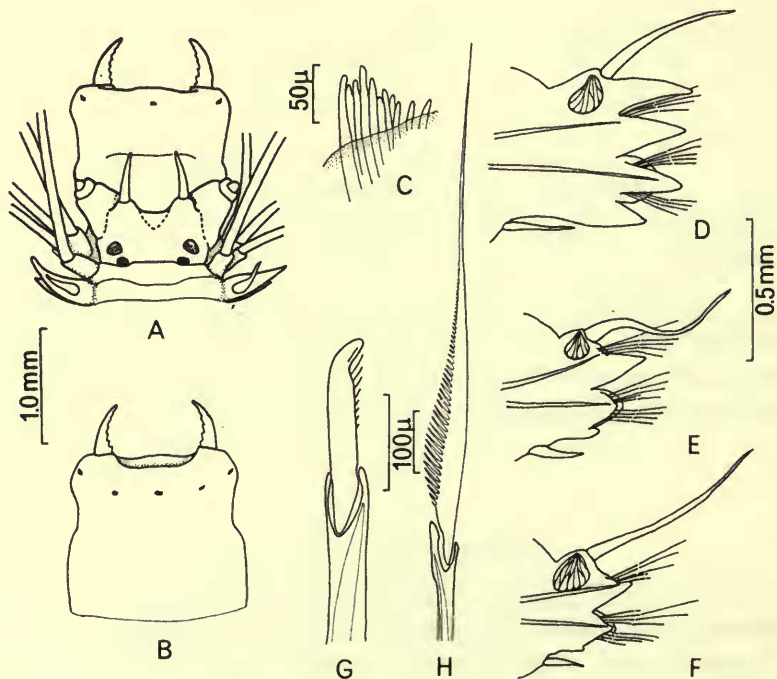


FIG. 8. *Solomononereis marauensis* n.gen., n.sp. (A) Dorsal view of anterior region and proboscis. (B) Ventral view of proboscis. (C) Paragnaths of Group II. (D-F) Anterior, middle and posterior parapodia. (G) Notopodial falciger. (H) Subacicular neuro-podial spiniger.

The proboscis carries a pair of brown, curved jaws, each with 7 or 8 teeth. The chitinous paragnaths are confined to the maxillary ring; they are minute, rod-like (7–10 μ in diameter) structures which are closely packed together in eight groups, three on the dorsal side and five on the ventral (fig. 8. A, B). Each of these discrete groups is composed of 10 to 15 paragnaths (fig. 8. c).

The structure of the parapodia changes progressively throughout the body and those of the anterior region are larger than those of the middle and posterior parts of the body. In the anterior region, the notopodium has two pointed ligules and the neuropodium has a bilobed upper ligule, composed of a pointed pre-setal lip and a rounded post-setal lip, and a pointed lower ligule (fig. 8. d). Between setigers 20 and 30, the upper notopodial ligule and the lower neuropodial ligule decrease in size, the former being lost altogether in more posterior segments while the latter persists as a rudiment (fig. 8. E, F). The dorsal cirri are slightly longer than the parapodial lobes in anterior segments but are relatively much longer in the posterior segments because of the diminished size of the parapodia.

At the base of the dorsal cirri, there are conspicuous glands which are roughly oval in shape and have a yellowish colour in preserved (alcohol) specimens. Each gland consists of fascicles of spindle-shaped cells which appear to open to the exterior at a pore situated just above the base of the dorsal cirrus.

Spinigerous setae are present in both notopodial and neuropodial bundles throughout the body. The notosetae are all homogomphic while the neurosetae vary from homogomphic to hemigomphic in the superior position, becoming heterogomphic in the inferior part. Superior sub-acicular spinigers have coarsely serrated blades (fig. 8. H) but all others are finely serrated. In the region of setiger 40, and persisting to the posterior end, two or three homogomph falcigers (fig. 8. G) appear in the notopodial bundle and, in addition, a single heterogomph falciger appears in the supra-acicular part of the neuropodium. Each falciger has an elongate, ciliated blade with a curved tip supported by a distinct tendon. All setae have a crystalline appearance.

A dark brown pigment remains over the dorsal surface of the proboscis, prostomium and anterior segments in preserved specimens.

Solomononereis resembles *Ceratonereis* in having paragnaths only on the maxillary ring of the proboscis but this similarity is superficial, the shape, as well as the arrangement, of the 'toothpick' or rod-shaped paragnaths possessed by *Solomononereis* being very different to that of the conical paragnaths found in *Ceratonereis*. Other features separating *Solomononereis* from other nereid genera include the weakly developed peristomial ring and the arrangement of the setae, i.e. spinigers are present in both rami throughout the body and, in addition, a few falcigers appear in both rami of the middle and posterior parapodia.

HABITAT. In sticky mud above MTL close to freshwater outflows.

RECORDS. Fintry Pt. – 1 (holotype); Nggela Is. (Sandfly Passage) – 3.
British Museum (Natural History) Registration No. Holotype 1970.32
Paratypes 1970.33

Family NEPHTYIDAE

Nephtys (Aglaophamus) munamaorii n. sp.

(Fig. 9. A-B)

DESCRIPTION: The holotype (from ML 37) is the largest specimen in the collection. It measures 16 mm in length for 60 segments and is about 1 mm wide.

The prostomium is rectangular in shape, its length being about 1.5 times the width, and has four small antennae on the antero-lateral margins. The proboscis has a long median papilla on its dorsal side with 14 rather indistinctly aligned rows of 5 or 6 papillae. Two small eyes, which appear as black spots, are situated near the posterior border of the second segment.

Branchiae commence on setiger 3 and are well developed in the anterior half of the body but gradually diminish in size in the posterior half so as to be absent from the last 10 or 12 segments. Each branchia is involute with a dorsal cirrus at its base (fig. 9. A).

The setigerous lobes of the parapodial rami are pointed. In the anterior segments, both the pre-setal and the post-setal lamellae are rounded, the latter being slightly larger, but in posterior segments these lamellae are much reduced in size (fig. 9. B). There are no superior neuropodial lamellae.

Setae are of the three usual types. Barred (or laddered) capillary setae compose the anterior fan which also includes a few smooth capillaries: in posterior segments the barred setae are longer and more slender with less distinct bars. Smooth or minutely serrated capillaries form the posterior fan: in the latter, there is also a row of lyriform forked setae.

Four species belonging to the subgenus *Aglaophamus* have been described from the tropical Indo-west-Pacific region. These are *N. (A.) dibranchis* Grube, *N. (A.)*

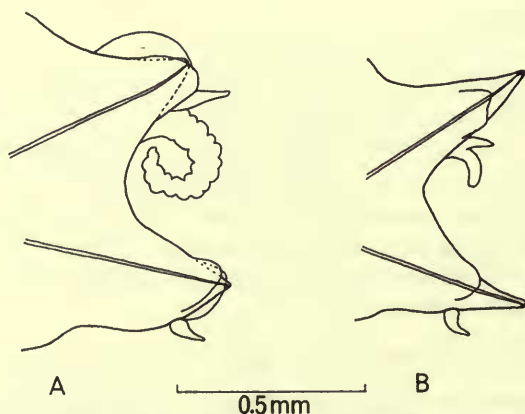


FIG. 9. *Nephtys (Aglaophamus) munamaorii* n.sp. (A-B) Anterior views of parapodia from setigers 19 and 45 respectively (setae omitted).

lyrochaeta Fauvel, *N. (A.) mirasetis* Hoagland, and *N. (A.) sinensis* Fauvel. In all four species the neuropodia of anterior segments have superior lamellae. The absence of this lamella, in addition to further differences in the parapodial structure, particularly the shape of the pre- and post-setal lamellae, is sufficient to distinguish *N. (A.) munamaorii*.

HABITAT. Mud and silty sand, 2-22 m depth.

RECORDS. ML 37 - 2 (including holotype); ML 69 - 1; ML 157 - 1; ML 188 - 8; ML 194 - 2; ML 196 - 1; ML 218 - 2.

British Museum (Natural History) Registration No. Holotype 1970.34
Paratypes 1970.35-41

***Nephtys (Micronephtys) sphaerocirrata* Wesenberg-Lund, 1949**

Nephtys sphaerocirrata Wesenberg-Lund, 1949 : 294, figs 24-26.

Nephtys (Micronephtys) sphaerocirrata: Day, 1967 : 347, fig. 15.3. a-d.

HABITAT. Silty sand at 15 m depth.

RECORD. ML 116 - 1.

NOTES. The single specimen is an anterior fragment of 33 segments, 5 mm in length. It differs from the type specimen in having two pairs of reddish eyes situated near the posterior margin of the prostomium. These may represent a sexual character since the specimen is a mature female containing oocytes. Other details agree with the type description.

DISTRIBUTION. Persian Gulf; South Africa; Marshall Islands.

***Nephtys (Nephtys) sp. cf. palatii* Gravier, 1904**

Nephtys palatii Gravier, 1904 : 472; 1906 : 129, pl. 1, figs 163-164, text-figs 286-289.

HABITAT. A wide variety of deposits from mud to coarse sand, 2-18 m depth.

RECORDS. ML 39 - 1; ML 68 - 1; ML 97 - 1; ML 156 - 1; ML 191 - 1; ML 192 - 1; ML 196 - 1; ML 203 - 1; ML 229 - 2.

NOTE. These specimens are close to *N. palatii* but the identity is uncertain because, on dissection, a median dorsal papilla could not be seen on the proboscis.

Family LACYDONIIDAE

***Paralacydonia weberi* Horst, 1923**

Paralacydonia weberi Horst, 1923 : 221, figs 1-2; Fauvel, 1953 : 129, figs 65. e-f.

HABITAT. Mud and sand, 2-24 m depth.

RECORDS. ML 29 - 1; ML 190 - 1; ML 191 - 1; ML 230 - 1.

NOTE. The largest of the specimens is 10 mm long for 50 segments and is much smaller than the holotype (40 mm for 100 segments) which was dredged from deep water (959 m).

DISTRIBUTION. Burma; East Indies; Samoa; Bass Strait.

Family GLYCERIDAE

Subfamily GLYCERINAE

Glycera gigantea Quatrefages, 1865

Glycera gigantea: Fauvel, 1923 : 387, fig. 152. d-k; 1953 : 296, fig. 152. d-k; Day, 1967 : 362, fig. 16.2. l-n.

HABITAT. A wide variety of deposits, chiefly silty mud and sand, from above MTL to 33 m depth.

RECORDS. Tetel Is. - 1; Florida Is. - 3; Komimbo Bay - 7; New Manra - 1; Graham Pt. - 8; Fintry Pt. - 4; Maraunibina Is. - 1; ML 229 - 1. (ML stations 100, 110, 192, 195 - one juvenile (?) at each).

DISTRIBUTION. North Atlantic; Mediterranean; Laccadive Sea; New Britain; N.E. Australia; Japan; eastern North Pacific.

Glycera lancadivae Schmarda, 1861

Glycera lancadivae Schmarda, 1861 : 95, with text-figs; Fauvel, 1953 : 291, fig. 147. g-h; Day, 1967 : 359.

HABITAT. A wide variety of deposits, from fine coral mud to coarse sand and shell gravel from above MTL to 11 m depth.

RECORDS. Tetel Is. - 3; Komimbo Bay - 4; Naro Bay - 1; Matiu Is. - 11; Maraunibina Is. - 22; Graham Pt. - 8; Fintry Pt. - 9; Yandina - 4; ML 98 - 1; ML 203 - 1; ML 229 - 2.

DISTRIBUTION. Tropical Indian Ocean; N.E. Australia; New Caledonia.

Glycera longipinnis Grube, 1878

Glycera longipinnis Grube, 1878 : 182, pl. 8, fig. 9; Fauvel, 1932 : 125, pl. 4, figs 11-14; 1953 : 291, fig. 148. a-d; Day, 1967 : 356, fig. 16.1. a-f.

HABITAT. Muddy silt (*Thalassia* flat) at LWM.

RECORD. Komimbo Bay - 1.

DISTRIBUTION. Tropical Indo-west-Pacific.

***Glycera rouxi* Audouin & Milne-Edwards, 1833**

Glycera rouxi: Fauvel, 1923 : 389, fig. 153. a-c; 1953 : 297, fig. 149. a-d; Day, 1967 : 362, fig. 16.3. a-d.

HABITAT. Silty mud at 9 m depth.

RECORD. ML 38 - 1.

DISTRIBUTION. North Atlantic; Mediterranean; Indo-west-Pacific to Japan; California.

Family **EUNICIDAE**Subfamily **EUNICINAE*****Eunice afra* Peters, 1854**

Eunice afra: Crossland, 1904 : 289, pl. 20, fig. 1-5, text-figs 43-45; Fauvel, 1953 : 235, fig. 116. h-i; Day, 1967 : 392, fig. 17.5. a-e.

HABITAT. Boring in coral on reef platform and in beachrock; amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORDS. Matiu Is. - 4; Mamara Pt. - 2; Batuona Is. - 2; New Manra - 1; Lauvie Is. - 2; Lingatu - 4; Yandina - 1; Maramasike Pg. - 5.

DISTRIBUTION. Indo-west-Pacific.

***Eunice antennata* (Savigny, 1820)**

Eunice antennata: Crossland, 1904 : 312, pl. 22, figs 1-7, text-figs 56-60; Fauvel, 1953 : 240, fig. 118. f-g; Day, 1967 : 384, fig. 17.2. k-q.

HABITAT. Boring in coral and under coral boulders on reef platform.

RECORDS. Matiu Is. - 5; Graham Pt. - 2; Yandina - 1.

DISTRIBUTION. North Atlantic; tropical Indo-Pacific.

***Eunice aphroditois* (Pallas, 1788)**

Eunice aphroditois: Fauvel, 1953 : 233, fig. 117. a-g; Day, 1967 : 389, fig. 17.4. l-o.

HABITAT. In *Acropora* rubble and under coral boulder on reef platform at LWM.

RECORDS. Tetel Is. - 1; Maraunibina Is. - 2.

DISTRIBUTION. North Atlantic; Mediterranean; Indo-Pacific to Japan and southern California.

Eunice coccinea Grube, 1878

Eunice coccinea Grube, 1878 : 153, pl. 9, fig. 1; Crossland, 1904 : 297, pl. 20, figs 6-7, text-figs 46-51; Fauvel, 1953 : 236, fig. 118. a-e; Day, 1967 : 389.

HABITAT. Boring in coral on reef platform.

RECORDS. Komimbo Bay - 1; Mamara Pt. - 1; New Manra - 1; Lingatu - 1; Maramasike Pg. - 2; Fanalei - 2 (posterior fragments).

NOTES. The two posterior fragments in the collection from the Fanalei 'palolo' rising (2-3.ix.66) can be identified by their relative size, absence of gills, parapodial structure and setae. One is female and contains large spherical oocytes (360 μ in diameter). On one side of each of these oocytes there is a patch of dark green pigment, surrounding a clear circular spot. The time of spawning is recorded as midnight to 0600 hours. The local name is 'raka-raka'.

DISTRIBUTION. Gulf of Guinea; tropical Indo-west-Pacific.

Eunice grubei Gravier, 1900

Eunice grubei Gravier, 1900 : 258, pl. 14, figs. 87-88, text-figs 125-129; Fauvel, 1953 : 237, fig. 119. a-e; Day, 1967 : 391.

HABITAT. Sedimented crevices in *Porites* boulders.

RECORDS. Graham Pt. - 2.

NOTES. One specimen is complete and, in this, the branchiae, which are present only on the anterior half of the body, have a maximum of 4 or 5 filaments.

DISTRIBUTION. Tropical Indo-west-Pacific.

Eunice marovoi n. sp.

(Fig. 10. A-H)

Eunice sp.: Gibbs, 1969 : 455, fig. 133.

DESCRIPTION. Complete specimens from the dredged material have a maximum length of 15 mm for 60 to 70 segments and a width of 1.0 to 1.5 mm. Larger specimens discovered living on *Cerithium vertagus* are all incomplete but are estimated to have been 20 to 25 mm in length. The holotype from ML 96 is 15 mm long for 66 segments.

The prostomium is bilobed with a shallow median groove between the palps (fig. 10. A). The antennae are weakly annulated and the median is about twice as long as the laterals, which, in turn, are about equal in length to the tentacular cirri (fig. 10. B). The eyes are black and reniform in shape.

The mandibles are elongate calcified plates. The maxillae are almost transparent but the toothed edges are brownish in colour and the medial and anterior edges of the maxillae supports ("carriers") are black, forming a T-shaped figure (fig. 10. c). Due to the transparent nature of the maxillae the details are difficult to determine. Maxillae I are falcate and devoid of basal teeth. The left Maxilla II is falcate with 4 to 6 ill-defined basal teeth. The right Maxilla II, left Maxilla III and Maxillae IV all have 10 to 13 small teeth while Maxillae V are toothless plates. The maxillary formula thus reads: Mx. I = 1 + 1; Mx. II = (1 + (4 — 6)) + (10 — 13); Mx. III = (10 — 13) + 0; Mx. IV = (10 — 13) + (10 — 13).

Branchiae commence on setiger 3 on all specimens and these are strongly arched over the dorsum, with a maximum of 5 or 6 filaments (fig. 10. d). In the larger specimens there are 21 to 23 pairs (i.e. extending to setigers 23 to 25) but smaller

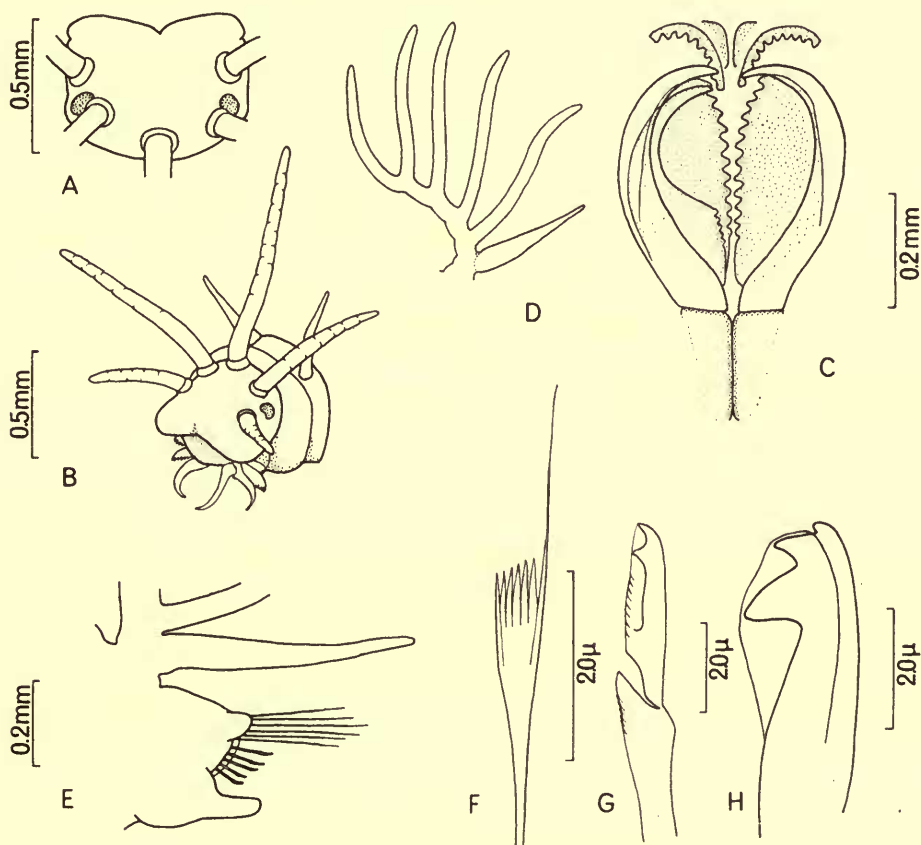


FIG. 10. *Eunice marovoi* n.sp. (A) Dorsal view of prostomium. (B) Antero-lateral view of anterior region. (C) Jaws. (D-E) Branchia and parapodium of setiger 10. (F) Comb seta. (G) Falciger. (H) Acicular seta.

specimens have only 15 to 20 pairs. The dorsal cirri are shorter but slightly stouter than the branchial filaments. On branchiferous segments, the ventral cirri are short and are swollen at their bases (fig. 10. E), a feature that is absent in the more posterior segments.

Acicula and setae are transparent. The capillary setae are slender with finely serrated edges. Comb setae are few in number and have about 7 teeth, one of the outer pair being greatly elongated (fig. 10. F). The falcigerous setae have bidentate blades with faintly serrated guards (fig. 10. G). Acicular setae are tridentate with rounded guards (fig. 10. H); two or three occur in each parapodium from setigers 15 to 20 to the posterior end. The projecting tips of the acicula are rounded and slightly curved.

The colour of preserved specimens is white. Despite their small size, a number of the specimens are mature with coelomic gametes. It would appear therefore that *E. marovoi* does not exceed 20 to 25 mm in length even when fully grown.

E. marovoi is distinct from all other *Eunice* species known from the Indo-west-Pacific region in terms of its maxillary structure, the number of branchiae and branchial filaments, in combination with the structure of the setae.

HABITAT. A wide variety of deposits ranging from mud to coarse sand from LWM to 33 m depth. At LWM on a sand flat to the north of Tankomo Is. (in the southern part of Marovo Lagoon) *E. marovoi* was discovered attached to the shell of the gastropod *Cerithium vertagus* L.

RECORDS. ML 37 - 1; ML 96 - 1 (holotype); ML 97 - 1; ML 100 - 1; ML 110 - 9; ML 134 - 1; ML 192 - 2; ML 218 - 1; ML 229 - 1; ML 230 - 2; north of Tankomo Is. - 5.

British Museum (Natural History) Registration No. Holotype 1970.42

Paratypes 1970.43-52

NOTES. The tube of this species is constructed of coarse bottom material, such as scaphopod and bivalve shell fragments, cemented to an organic lining. In those specimens associated with *Cerithium vertagus*, the tube was constructed along the length of the upper surface of the gastropod shell (see Gibbs, 1969).

Eunice norvegica (Linnaeus, 1767)

Eunice floridana: Fauvel, 1923 : 402, fig. 157. a-g; 1953 : 235, fig. 117. a-g.

Eunice norvegica: Pettibone, 1963 : 240, fig. 63. f; Day, 1967 : 388, fig. 17.3. r-v.

HABITAT. On surface of *Acropora* sp.

RECORD. Yandina - 1.

NOTES. The specimen is 17 mm long, 3 mm wide and has 70 segments (apparently regenerating from setiger 27). Its preserved colour is medium brown with three whitish spots per segment arranged in longitudinal lines down the body; the gills

and dorsal cirri are purple. In life the colour was bluish-black with orange spots. The maxillary formula is: Mx. I = 1 + 1; Mx. II = 7 + 7; Mx. III = 6 + 0; Mx. IV = 4 + 8; Mx. V = 1 + 1. The labrum is calcified and pearly-white in colour. The branchiae start on setiger 5 and have a maximum of 6 or 7 filaments. Acicular setae are black with conspicuous guards.

In specimens from other localities the branchiae commence between setigers 7 to 10 but otherwise this specimen agrees in detail. Apart from a single specimen from Indo-China (Fauvel, 1939) no other records of *E. norvegica* from the Pacific Ocean have been traced despite the species being widespread and occurring in depths of over 1500 m (Pettibone, 1963).

DISTRIBUTION. North Atlantic; Mediterranean; Indian Ocean; Indo-China.

Eunice tentaculata Quatrefages, 1865

Eunice tentaculata: Fauvel, 1953: 234, fig. 118. m-p; Day, 1967: 391, fig. 17.4. s-v.

HABITAT. Under coral boulders on silty sand; amongst *Phyllochaetopterus socialis* tubes.

RECORDS. Maraunibina Is. - 2; Batuona Is. - 1.

DISTRIBUTION. Indo-west-Pacific.

Eunice tubifex Crossland, 1904

Eunice tubifex Crossland, 1904: 303, pl. 21, figs 1-8, text-figs 52-55; Fauvel, 1953: 232, fig. 116. a-g; Day, 1967: 386, fig. 17.3. k-q.

HABITAT. In coral at LWM and on wharf piles at 5 m depth.

RECORDS. Tetel Is. - 2; Yandina - 2.

DISTRIBUTION. Tropical Indo-west-Pacific.

Eunice (Palola) siciliensis Grube, 1840

Eunice (Palola) siciliensis: Fauvel, 1923: 405, fig. 159. e-m; 1953: 241, fig. 121. e-m; Day, 1967: 382, fig. 17.2. a-f.

HABITAT. Boring in coral and beachrock; in *Acropora* rubble and shell gravel; under coral boulders in silty sand.

RECORDS. Kokomtambu Is. - 1; Tetel Is. - 16; Komimbo Bay - 2; Mamara Pt. - 3; Matiu Is. - 34; Yandina - 2; Lingatu - 6; New Manra - 9; Lauvie Is. - 11; Graham Pt. - 4; Maramasike Pg. - 10; Fanalei - 4 (posterior fragments).

NOTES. The four posterior fragments collected during the spawning at Fanalei can be readily identified by the absence of comb and acicular setae, the black acicula and the dark spot on the ventral surface of each segment. Three of the fragments are female and contain spherical oocytes about 200μ in diameter. The time of spawning on 2.xi.66 was between 2000 and 2200 hours. The local name is "falisi ogu".

DISTRIBUTION. Mediterranean; circumtropical.

Lysidice collaris Grube, 1870

Lysidice collaris: Fauvel, 1953 : 248, fig. 124. a-g; Day, 1967 : 402, fig. 17.8. a-f.

HABITAT. Boring in coral and beachrock; amongst *Phyllochaetopterus socialis* tubes; in the sponge *Halichondria* sp. at 5 m depth.

RECORDS. Matiu Is. - 5; Batuona Is. - 1; New Manra - 3; Sifola - 2; Lingatu - 2; Mamara Pt. - 2; Graham Pt. - 1; Lauvie Is. - 1; Yandina - 12; Fanalei - 1.

NOTES. The specimen from the Fanalei "palolo" rising is spent. It has enlarged eyes provided with lenses.

DISTRIBUTION. Tropical Indo-Pacific to Japan and Gambier Islands.

Marphysa macintoshi Crossland, 1903

Marphysa macintoshi Crossland, 1903 : 137, pl. 14, figs 3-6, text-fig. 12; Fauvel, 1953 : 246; Day, 1967 : 396, fig. 17.6. a-e.

HABITAT. Silty mud at MTL.

RECORDS. Nggela Is. - 3.

DISTRIBUTION. Tropical Indian Ocean.

Nematonereis unicornis (Grube, 1840)

Nematonereis unicornis: Fauvel, 1923 : 412, fig. 162. h-n; 1953, 249, fig. 124. h-n; Day, 1967 : 403, fig. 17.8. j-n.

HABITAT. Under boulders in muddy silt at MTL; amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORDS. Tetel Is. - 1; Batuona Is. - 1.

DISTRIBUTION. North Atlantic; Mediterranean; tropical Indo-west-Pacific.

Subfamily ONUPHINAE

Onuphis (Nothria) holobranchiata Marenzeller, 1879

Onuphis (Nothria) holobranchiata Marenzeller, 1879 : 132, pl. 4, fig. 1; Izuka, 1912 : 106, pl. 11, figs 10-12; Fauvel, 1953 : 256, fig. 127. f-h; Day, 1967 : 424, fig. 17.13. f-g.

HABITAT. A wide variety of deposits, from silty sand to coarse sand and shell gravel from MTL to LWM; mud with organic debris at 2 m depth.

RECORDS. Tetel Is. - 14; Komimbo Bay - 1; Matiu Is. - 1; Kalota Is. - 1; ML 68 - 37.

NOTES. The distribution of the simple branchiae over the anterior segments shows some degree of variation, perhaps reflecting differences in the growth stages. For example, in the smaller specimens present in the large sample obtained at ML 68 the branchiae commence on setigers 2 to 5 whereas in the larger specimens from the same sample they begin on the first setiger, as typical for the species. Specimens of all sizes possess similar pseudocompound hooks.

The dredged specimens were chiefly extracted from tubes composed of plant debris and sediment particles cemented to an organic lining and often the tubes were found to run along the central cavities of hollow plant stems. Specimens from the littoral zone had tubes encrusted with coarse sand grains and *Halimeda* discs.

DISTRIBUTION. Tropical Indo-west-Pacific to Japan.

Subfamily LYSARETINAE

Oenone fulgida (Savigny, 1818)

Aglaurides fulgida: Fauvel, 1953, 250, fig. 125. a-f.

Oenone fulgida: Crossland, 1924 : 85, fig. 106-111; Imajima & Hartman, 1964 : 267; Day, 1967 : 426, fig. 17.14. a-g.

HABITAT. Boring in coral (*Porites*).

RECORDS. Tetel Is. - 2; Yandina - 1.

DISTRIBUTION. Circumtropical.

Subfamily LUMBRINERINAE

Lumbrineris latreilli Audouin & Milne-Edwards, 1834

Lumbriconereis latreilli: Fauvel, 1923 : 431, fig. 171. m-r; 1953 : 266, fig. 134. m-r.

Lumbrineris latreilli: Day, 1967 : 438, fig. 17.16. p-t.

HABITAT. Under coral boulders in silty sand; mud at 18 m depth.

RECORDS. Tetel Is. - 1; Komimbo Bay - 1; Graham Pt. - 2; Maraunibina Is. - 1; ML 188 - 1.

DISTRIBUTION. Cosmopolitan.

***Lumbrineris papillifera* (Fauvel, 1919)**

Lumbriconereis papillifera Fauvel, 1919a : 395, pl. 15, figs 9-16.

Lumbrineris papillifera: Day, 1967 : 442, fig. 17.17. p-s.

HABITAT. Silty sand at 9 m depth.

RECORD. ML 56 - 1.

NOTES. The specimen is incomplete posteriorly but middle segments having the characteristic ventral papillae are present and other details correspond to the species description. This is the first record of the species from the Pacific region.

DISTRIBUTION. Tropical East Africa.

***Lumbrineris sphaerocephala* (Schmarda, 1861)**

Notocirrus sphaerocephalus Schmarda, 1861 : 116, with text-figs.

Lumbriconereis sphaerocephala: Ehlers, 1904 : 33, pl. 5, figs 3-11; Fauvel, 1953 : 267, fig. 135. c-f.

HABITAT. Clean sand at LWM.

RECORD. Komimbo Bay - 1.

DISTRIBUTION. Indo-west-Pacific.

Subfamily ARABELLINAE

***Arabella iricolor* (Montagu, 1804)**

Arabella iricolor: Fauvel, 1923 : 438, fig. 175. a-h; 1953 : 274, fig. 140. a-h; Day, 1967 : 446, fig. 17.18. i-m.

HABITAT. Under boulders in muddy silt, sand and shell gravel at MTL.

RECORDS. Tetel Is. - 3; Maraunibina Is. - 2; Graham Pt. - 6.

DISTRIBUTION. Cosmopolitan.

***Arabella mutans* (Chamberlin, 1919)**

Arabella mutans: Fauvel, 1953 : 275, figs 140. i-l, 143. g-i; Day, 1967 : 446, fig. 17.18. f-h.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORDS. Batuona Is. - 5.

DISTRIBUTION. North Atlantic; East Africa; Easter Is.; eastern Pacific.

***Drilonereis major* Crossland, 1924**

Drilonereis major Crossland, 1924 : 57, figs 73-79; Fauvel, 1953 : 277, fig. 143. k-l.

HABITAT. Boring (?) in coral on reef platform at LWM.

RECORDS. Maramasike Passage - 2.

NOTES. The prostomium is semi-circular and flattened. The maxillary formula is Mx. I = 1 + 1; Mx. II = 6 + 6; Mx. III = (3 - 4) + (3-4); Mx. IV = (2 - 3) + (2 - 3): the teeth of Mx. III and Mx. IV are very irregular in size and difficult to count, as noted by Fauvel (1932). This is a new record for the Pacific region.

DISTRIBUTION. Gulf of Suez; Zanzibar; Bay of Bengal.

Subfamily **DORVEILLEINAE*****Dorvillea* sp.**

HABITAT. Coarse sand at MTL.

RECORD. Komimbo Bay - 1.

NOTES. The specimen is 7 mm long (incomplete). Its antennae have eight annuli and the dorsal cirri, commencing on setiger 2, are mounted on long cirrophores. Forked setae are present from the first setiger and have unequal prongs. It is close to *D. incertus* (Schmarda) but differs from this species in having forked setae from the first, not the second, setiger.

Family **ORBINIIDAE*****Haploscoloplos bifurcatus* Hartman, 1957**

Haploscoloplos bifurcatus Hartman, 1957 : 277.

HABITAT. Mud and silty sand, 2-13 m depth.

RECORDS. ML 68 - 16; ML 69 - 1; ML 228 - 2.

NOTES. The thorax is composed of 17 to 20 setigers. Branchiae commence on setigers 8, 9 or 10 as small triangular lobes, increasing in size on the posterior thoracic segments. Characteristically, the post-setal lobes of the neuropodia in the posterior half of the thorax (from setiger 12) are divided. Abdominal parapodia lack inter-ramal cirri.

DISTRIBUTION. South and south-east Australia.

Naineris laevigata (Grube, 1855)

Naineris laevigata: Fauvel, 1927 : 22, fig. 7. a-l; 1953 : 310, fig. 163. a-l; Hartman, 1957 : 297, pl. 35, figs 1-8; Day, 1967 : 539, fig. 32.2. a-f.

HABITAT. Medium to coarse sand, MTL to LWM.

RECORDS. Haroro - 1; Graham Pt. - 2.

DISTRIBUTION. Cosmopolitan in warm waters.

Family SPIONIDAE

Dispio maroroi n. sp.

(Fig. 11. A-D)

DESCRIPTION. All four specimens are incomplete. The holotype is 18 mm in length with 46 segments and the largest of the paratypes is 45 mm long for 86 segments. The diameter of the body is about 2 mm.

The prostomium is pointed anteriorly and extends back as an occipital ridge to the first segment where it forms a small occipital tentacle (fig. 11. A). On either side of this ridge there are conspicuous nuchal slits which are concealed at their posterior ends by dorsal extensions of the peristomium. Two small eyes, not visible from the dorsal aspect, are situated laterally on the prostomium. The palps are missing on all specimens.

The parapodia of the first two segments differ from those of subsequent segments in that the post-setal lobes of the notopodia are expanded, with 6 or 7 digitiform processes along their free edges (fig. 11. B). The lobes of subsequent notopodia have smooth outlines. The post-setal neuropodial lobes of the first few segments are rounded, becoming flatter in shape in later segments. Pre-setal lobes are low and rounded.

Branchiae are present on all segments from setiger 1. They are fused with the post-setal notopodial lobes for most of their length and are slightly longer than the lobes. Commencing between setigers 18 to 20, accessory branchiae appear on the posterior side of the notopodia. Each is a palmate group of 6 to 8 lobes, each lobe containing a vascular loop (fig. 11. C).

Apart from the first setiger, which has a bundle of long fine capillaries which projects forward over the head region, the notosetae are broad-winged and narrow-winged capillaries, the two types being of similar length. The neurosetae of the anterior segments are similar to the notosetae except that the narrow-winged capillaries are longer than the broad-winged. Between setigers 24 to 28, the broad-winged capillaries are replaced by very finely pointed setae and 4 or 5 unidentate hooded hooks appear (fig. 11. D). In all neuropodia, there is an inferior group of 4 or 5 sabre-like setae.

D. maroroi is close to the type species *D. uncinata* Hartman (1951) from Florida but differs from it in that the post-setal notopodial lobes of setigers 1 and 2 are much enlarged whilst that of setiger 3 is unmodified. A further difference is that the accessory branchiae start between setigers 18 to 20 not between setigers 24 to 28 and also there are minor variations in the form of the head region. In other details the specimens from the Solomon Islands resemble those from Florida. The central American species *D. remanei* and *D. schusterae*, described by Friedrich (1956), both differ in having digitate neuropodial, as well as notopodial, lobes in the anterior segments. In the fourth species, *D. magna* (Day, 1955) the accessory branchiae take the form of minute lamellae, not lobes.

HABITAT. Clean sand at LWM.

RECORDS. Komimbo Bay – 1 (holotype); Graham Pt. – 3.

British Museum (Natural History) Registration No. Holotype 1970.53

Paratypes 1970.54

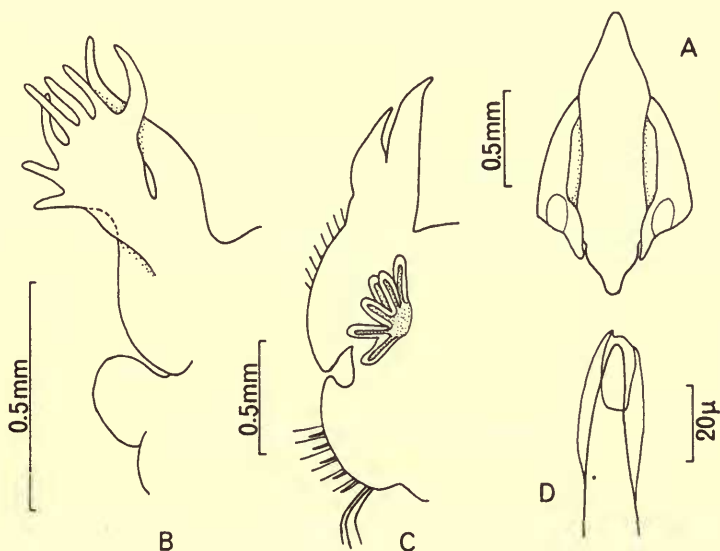


FIG. 11. *Dispio maroroi* n.sp. (A) Dorsal view of head region. (B–C) Posterior views of parapodia from setiger 1 (setae omitted) and setiger 40. (D) Neuropodial hook.

Laonice cirrata (Sars, 1851)

Laonice cirrata: Fauvel, 1927 : 38, fig. 12. a–e; 1953 : 315, fig. 165. a–e; Day, 1967 : 480, fig. 18.6. h–k.

HABITAT. Mud at 11 m depth.

RECORD. ML 195 – 1.

DISTRIBUTION. Cosmopolitan.

***Malacoceros indicus* (Fauvel, 1928)**

Scolecopsis indica Fauvel, 1928 : 93, fig. 2. g-m; 1953 : 313, fig. 165. g-m.

Malacoceros indicus: Pettibone, 1963a : 99 (synonymy); Day, 1967 : 477, fig. 18.5. p-u.

HABITAT. Silty mud and sand about MTL.

RECORDS. Nggela Is. - 2; Tetel Is. - 1; Fintry Pt. - 9.

NOTES. Specimens have 10 to 12 bidentate hooks in the neuropodia; in specimens from India there are less than 6.

DISTRIBUTION. Indo-west-Pacific.

***Nerinides* sp. cf. *gilchristi* Day, 1961**

Nerinides gilchristi Day, 1961 : 491, fig. 5. a-d; 1967 : 485, fig. 18.7. i-l.

HABITAT. Silty sand (*Thalassia* flat).

RECORD. Komimbo Bay - 1.

NOTES. The specimen is in two parts - an anterior fragment of 15 setigers and a middle body section of 13 setigers. In the latter, the branchiae are flag-shaped, corresponding to those of *N. gilchristi*. However there are 7 or 8 hooded hooks per neuropodium, each with a single tooth above the main fang, not 10 to 12 hooks having three teeth above the main fang, as in *N. gilchristi*.

***Polydorella novaegeorgiae* n. sp.**

(Fig. 12. A-F)

DESCRIPTION. All five specimens are incomplete. The largest fragment, chosen for the holotype, measures 15 mm for 50 setigers and has a width of 1.0 to 1.5 mm. The colour is whitish except for a brownish pigmentation on the peristomium and anterior segments.

The prostomium has a rounded anterior margin and extends back as a low ridge to the middle of setiger 2. On its dorsal surface there are two pairs of eyes and a small occipital papilla (fig. 12. A). The broad peristomium carries a pair of stout palps which reach to about setiger 15.

On the anterior segments, the notopodial lobes gradually increase in size and are largest on setiger 4. The neuropodial lobes of setigers 1 to 6 are similar in size and are semi-circular in outline; from setiger 7 they are small and inconspicuous. Branchiae commence on setiger 6 and continue to setigers 15 to 18 (i.e. there are 10 to 13 pairs). These are cirriform in shape, the longest being equal to the body width.

Both notosetae and neurosetae in the anterior segments, with the exception of the notosetae of setiger 4, are winged capillaries. The notopodial bundles are composed of two rows of curved capillaries which have narrow blades on one side (fig. 12. C), plus a superior group of similar form but much longer. The neurosetae are narrow-winged capillaries, each finely tapering to a sharp point.

As is characteristic of the genus, the notopodium of setiger 4 carries modified setae. Two types are present in a double row that follows a wide arc (fig. 12. B); those of the anterior row are strongly angled at their distal end with a broad blade showing fine striations (fig. 12. D) while those of the posterior row are stout hooks with bluntly tapering, slightly curved tips (fig. 12. E). There are between 20 and 25 pairs of the two types of modified setae, plus a superior group of about 15 narrow-winged capillaries, in each of the notopodia of setiger 4. In the post-branchial region the superior capillary group is replaced by a group of about 10 needle-like setae. Bidentate hooded hooks (fig. 12. F) commence at setiger 7 and number between 18 and 20 per neuropodium.

The type species *Polydorella prolifera* Augener was described from Sharks Bay, Western Australia, (Augener, 1914) and has been recorded from India (Gravely,

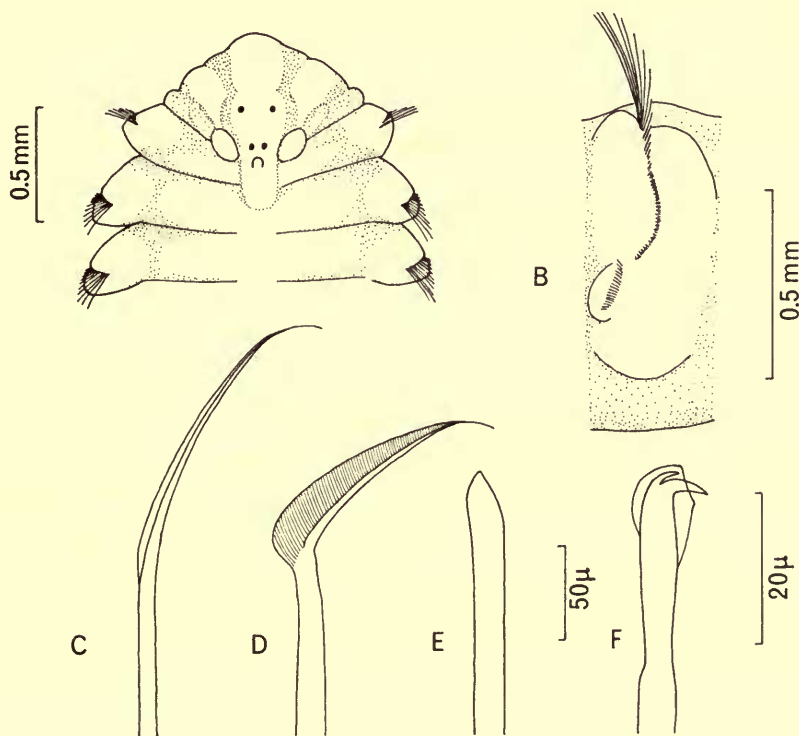


FIG. 12. *Polydorella novaegeorgiae* n.sp. (A) Dorsal view of anterior region. (B) Lateral view of setiger 4. (C) Notopodial capillary. (D-E) Modified notopodial setae from setiger 4. (F) Neuropodial hook.

1927; Fauvel, 1930). It differs from *P. novaegraegiae* in many respects, particularly in the form of the prostomium, the structure of the modified setae of setiger 4 and in the number of branchiae. A further point of difference is that the specimens from Marovo Lagoon do not show any sign of reproduction by scissiparity, a feature observed in *P. prolifera*.

HABITAT. Mud at 11 m depth.

RECORDS. ML 39 - 5.

British Museum (Natural History) Registration No. Holotype 1970.55
Paratypes 1970.56

Prionospio cirrifera Wirén, 1883

Prionospio cirrifera: Fauvel, 1927 : 62, fig. 21. k-n; 1953 : 324, fig. 164. k-m; Day, 1967 : 486, fig. 18.8. a-d.

HABITAT. Mud at 22 m depth.

RECORD. ML 29 - 1.

NOTES. Although *P. cirrifera* has not been recorded previously from the west Pacific region the single specimen agrees in detail. It has 12 pairs of branchiae and the hooded crotchets are multidentate, corresponding to the northern form (cf. Day, 1967).

DISTRIBUTION. North Atlantic; North Pacific; India; South Africa.

Prionospio ehlersi Fauvel, 1928

Prionospio ehlersi Fauvel, 1928a : 10, fig. 1. a-r; Day, 1967 : 490, fig. 18.9. d-f.

HABITAT. Mud and sand, 2-22 m depth.

RECORDS. ML 37 - 2; ML 41 - 4; ML 134 - 1; ML 156 - 8; ML 191 - 1; ML 194 - 2; ML 195 - 1; ML 218 - 6.

NOTE. This is the first record of *P. ehlersi* from the Pacific region.

DISTRIBUTION. Morocco; East Africa.

Prionospio malmgreni Claparède, 1870

Prionospio malmgreni: Fauvel, 1927 : 61, fig. 21. a-e; Hartman & Imajima, 1964 : 285; Day, 1967 : 492, fig. 18.9. a-c.

HABITAT. Silty sand at 2 m depth.

RECORDS. ML 196 - 2.

NOTES. Both specimens are small, about 10 mm long. Across setiger 7 there is a membraneous ridge and this feature separates *P. malmgreni* from the closely allied species *P. steenstrupi* Malmgren.

DISTRIBUTION. Atlantic; Mediterranean; South Africa; South-west Australia; Japan; southern California.

***Prionospio pinnata* Ehlers, 1901**

Prionospio pinnata: Fauvel, 1953 : 323, fig. 174. e; Imajima & Hartman, 1964 : 286; Day, 1967 : 488, fig. 18.8. 1-1.

HABITAT. Mud and silty sand, 2-26 m depth

RECORDS. ML 37 - 10; ML 40 - 5; ML 41 - 27; ML 110 - 4; ML 156 - 2; ML 157 - 2; ML 191 - 1; ML 194 - 2; ML 195 - 1.

DISTRIBUTION. Cosmopolitan.

***Prionospio steenstrupi malayensis* Caullery, 1914**

Prionospio steenstrupi malayensis: Caullery, 1944 : 14, fig. 8. a-f.

HABITAT. A wide variety of deposits from mud to coarse sand, 2-24 m depth.

RECORDS. ML 55 - 2; ML 68 - 1; ML 188 - 1; ML 192 - 1; ML 196 - 5; ML 204 - 1; ML 230 - 1.

NOTES. Caullery recognized the subspecies *malayensis* on the grounds of geographical separation from the stem species which was then (1914) known only from the North Atlantic. In the Solomon Islands specimens there are low membraneous ridges across the dorsum from setiger 12 to setiger 16 or 17. These ridges are not present in the stem species and thus this feature distinguishes the two forms.

DISTRIBUTION. East Indies.

***Prionospio tetelensis* n. sp.**

(Fig. 13. A-D)

DESCRIPTION. All specimens are incomplete. The holotype from ML 188 is 14 mm long for 42 segments and has a diameter of 2 to 3 mm. One of the paratypes (from ML 68) is a mature female containing oocytes which are turquoise blue in colour.

The prostomium is rounded anteriorly and extends back to setiger 3 as an elevated keel between peristomial folds (fig. 13. B). There are three pairs of prostomial

eyes, two pairs of which are small and situated to the anterior of a larger, transverse pair. On either side of the prostomium, the peristomium is extended to form lateral wing-like expansions.

The first setiger is small and lacks notosetae. The parapodial lobes of the anterior segments are large and ear-shaped, the pre-setal ones being smaller than the post-setal (fig. 13. c). These lobes gradually decrease in size, becoming flatter and less rounded in the middle body. From setiger 6 to between setigers 20 to 26 the post-setal notopodial lobes are joined across the dorsum by membranous ridges. In mature specimens there are no genital pockets between the anterior neuropodia.

Branchiae are present on setigers 2 to 5 and all are pinnate (fig. 13. A). Each has a short stem and numerous pinnules arising from the lateral and posterior surfaces of the main axis. The size of the branchiae decreases from the first to the fourth pair.

Both notosetae and neurosetae in the anterior segments are narrow-winged capillaries. Commencing between setigers 20 and 22, about 12 hooks appear in the neuropodia, accompanied by very fine pointed setae and also 2 or 3 sabre-like setae. Hooks do not appear in the notopodia until about setiger 50. Each hook is hooded with a series of five teeth above the main fang (fig. 13. D).

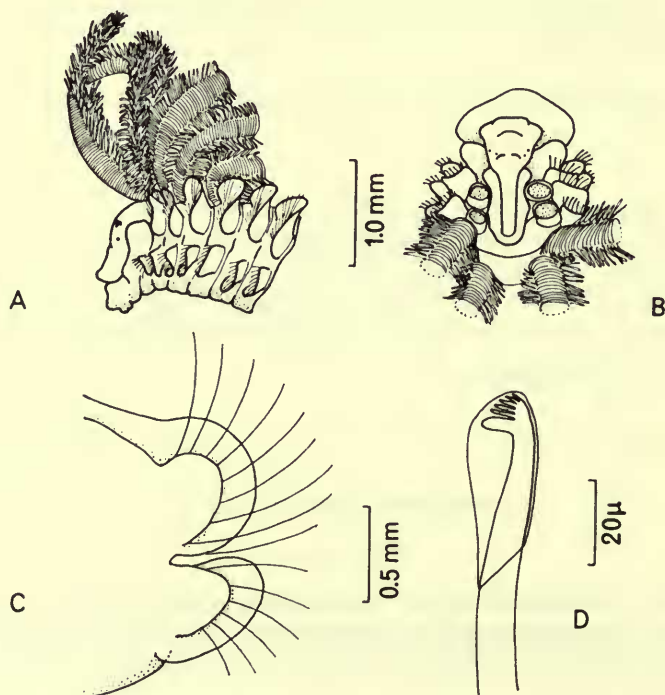


FIG. 13. *Prionospio tetelensis* n.sp. (A-B) Lateral and dorsal views of anterior region. (C) Parapodium of setiger 15. (D) Neuropodial hook.

Of the many species of the genus *Prionospio* now known, three are similar to *P. tetelensis* in possessing four pairs of pinnate branchiae on setigers 2 to 5. These are *P. treadwelli* Hartman, *P. tenuis* (Verrill) – both from the Atlantic coast of North America – and *P. peruana* Hartmann-Schröder from Peru. *P. tetelensis* may be distinguished from all three species on the basis of a combination of characters, namely, the prostomial keel between peristomial folds extending to setiger 3, the lateral wing-like expansions of the peristomium, the membraneous ridges across the dorsum of setigers 6 to 20 and the neuropodial hooks being present from setiger 20.

HABITAT. Mud from LWM to 18 m depth.

RECORDS. Tetel Is. – 1; ML 68 – 1; ML 188 – 1 (holotype); ML 195 – 1; ML 228 – 1.

British Museum (Natural History) Registration No. Holotype 1970.57

Paratypes 1970.58–61

Pseudopolydora corallicola Woodwick, 1964

Pseudopolydora corallicola Woodwick, 1964 : 151, fig. 2. 9–12.

HABITAT. Coralline mud at LWM; silty sand at 2 m depth.

RECORDS. Matiu Is. – 1; ML 196 – 1.

NOTES. Both specimens are small (under 5 mm long) and are damaged. Those characters that can be checked, such as the prostomial ridge extending to setiger 6, the modified setae of setiger 5 and the peculiar fenestrated neuropodial hooks, all correspond.

DISTRIBUTION. Marshall Islands.

Pseudopolydora sp.

HABITAT. In brackish water (5.6‰) – boring in sponge.

RECORDS. Lagoon at the mouth of the Lunga River at Lunga Point – numerous specimens.

NOTES. These specimens are up to 5 mm in length. The modified setae of setiger 5 include an anterior row of broad-winged, sharply tapering setae and a posterior row of stout hooks with recurved tips: there are 6 or 7 pairs of the two types. Branchiae commence on setiger 6 and extend to setigers 16 or 17 (11 or 12 pairs). Neuropodial hooks are present from setiger 8. In the posterior notosetae there are one or two stout, curved hooks which arch over the dorsum.

Mr. W. J. Light has examined this series and, in a personal communication, he

has pointed out that certain characters, in particular the form of the modified setae on setiger 5 and also the presence of specialized posterior notosetae, indicate that these specimens represent a new species of *Pseudopolydora*. He has kindly consented to publish a description in a separate paper.

***Scolecopsis squamata mendanai* n. subsp.**

DESCRIPTION. The holotype is a complete specimen measuring 50 mm in length for about 200 segments. The diameter of the body is between 1.0 to 1.5 mm. The palps are very small and slender extending only to setiger 3 or 4. There are four eyes set in a transverse row across the prostomium. Branchiae commence on setiger 2 and are fused to the notopodial lamellae for about one-third of their length. Bidentate hooks number 9 or 10 in the neuropodia from about setiger 45, and 1 to 3 in the notopodia starting between setigers 90 to 100. The post-setal neuropodial lobes are ear-shaped in anterior segments but become bilobed between setigers 35 to 45 and are distinctly divided in the middle segments.

The subspecies *mendanai* is distinct from the stem species (Fauvel, 1927 : 36, fig. 11. g-n, as *Nerine cirratulus*) in the following characters: (i) the palps are very small reaching only to setiger 3 (not setiger 24), (ii) neuropodial hooks are present from setiger 45 (not setiger 40) and (iii) notopodial hooks are present from about setiger 90 (not setiger 60). The subspecies *saipanensis* (Hartman, 1954a : 230, fig. 2. a-e, as *Nerine cirratulus saipanensis*) differs in that the hooks appear in the neuropodia from setigers 29 to 31 and in the notopodia from setiger 41.

HABITAT. Silty sand, MTL to LWM.

RECORDS. Graham Pt. - 5; Fintry Pt. - 6 (including holotype).

British Museum (Natural History) Registration No. Holotype 1970-62

Paratypes 1970-63-65

***Spio filicornis* (Müller, 1776)**

Spio filicornis: Fauvel, 1927 : 43, fig. 15. a-g; Imajima & Hartman, 1964 : 289; Day, 1967 : 481, fig. 18.6. 1-o.

HABITAT. Coralline mud at LWM.

RECORDS. Matiu Is. - 8.

DISTRIBUTION. North Atlantic; South Africa; North Pacific.

Family **MAGELONIDAE*****Magelona japonica*** Okuda, 1937

Magelona japonica Okuda, 1937 : 247, figs 23-24; Imajima & Hartman, 1964 : 290; Tampi & Rangarajan, 1964 : 113, figs 44-49.

HABITAT. Coarse sand below LWM.

RECORDS. Tetel Is. - 2.

DISTRIBUTION. Bay of Bengal; North Pacific.

***Magelona* sp.**

HABITAT. Silty sand at 2 m depth.

RECORD. ML 283 - 1.

NOTES. The specimen is an anterior fragment of 20 segments. The prostomium is elongated with a rounded anterior margin lacking frontal horns. Anterior segments have large notopodial and small neuropodial lamellae. The setae of segment 9 are unspecialized. From setiger 10 the parapodial lamellae are rhomboidal. The abdominal hooded hooks are bidentate with a single tooth above the main fang.

The specimen is close to *M. capensis* Day, differing in the shape of the abdominal lamellae being rhomboidal not oval and in the hooks being bidentate not tridentate.

Family **TROCHOCHAETIDAE*****Poecilochaetus serpens honiarae*** n. subsp.

DESCRIPTION. All of the specimens are incomplete; the largest specimen (the holotype) is 20 mm long with 44 segments and has a body width of 2.0 mm. The characters are those of the stem species (Allen, 1904 : 79, pl. 7-12, text-fig. 1) except that the aristate spines, with knobbed ends and hairy terminal aristae (Allen, 1904 : pl. 9, fig. 18) commence between setigers 20 to 25 and thus are not confined to the posterior region beyond setiger 80, as in the stem species.

HABITAT. Silty and coarse sand, MTL to LWM.

RECORDS. Tetel Is. - 3 (including holotype); Komimbo Bay - 2.

British Museum (Natural History) Registration No. Holotype 1970-66

Paratypes 1970-67-69

NOTES. The Solomon Islands specimens have a reddish, chitinous, triangular plate on the dorsum of setiger 9 (a similar, but diamond-shaped, structure has been

noted in *P. johnsoni* by Hartman, 1939). Lateral sense organs are missing from setigers 6 to 9 and the branchiae, composed of two filaments on the posterior sides of the parapodia, are present from setigers 17 or 18.

An examination of *P. serpens* individuals from the type locality at Plymouth reveals that Allen overlooked the dorsal plate on setiger 9 and also the absence of lateral sense organs on setigers 6 to 9. Allen states that there are two pairs of branchial filaments from setiger 21 but in the several specimens which have been examined there is only one pair, although a third filament sometimes occurs after setiger 32.

Thus adult specimens of the stem species *P. serpens* from the type locality and adults of the subspecies *honiarae* from the Solomon Islands are very similar, the distinguishing feature being the presence of aristate spines in the middle body segments of the latter. This distinction is recognized as a minor one, deserving of sub-specific separation only.

P. serpens is remarkable in its retention of the pelagic habit until a late stage of larval development. Thus it is not surprising that the existence of this species in the Indo-west Pacific region was known from plankton records long before adult specimens were discovered in the region. Pelagic stages have been described from Indo-China (Fauvel, 1939) and India (Banse, 1959; Ganapati & Radhakrishna, 1958). Only recently has an adult specimen been discovered in Indian waters (Achari, 1968).

Poecilochaetus tropicus Okuda, 1935

Poecilochaetus tropicus Okuda, 1935 : 289, figs 1-2; 1937a : 294, figs 39-40.

HABITAT. Silty and coarse sand from MTL to LWM.

RECORDS. Tetel Is. - 5; Graham Pt. - 1.

NOTES. *P. tropicus* was described from an incomplete specimen of 39 segments taken in the Palau Islands in 1934. No further material appears to have been recorded since that date.

All of the Solomon Islands specimens are incomplete. The most complete individual is immature, measuring 26 mm long for 70 setigers, but the largest specimen appears mature and has a length of 30 mm for 50 setigers. The original description can be supplemented with the following details - (i) the two branchial filaments situated on the posterior sides of the parapodia are not present in small specimens but are conspicuous in mature individuals; (ii) on the dorsal surface of setiger 9, there is a small, yellowish, semi-lunar-shaped plate (a similar structure to that in *P. serpens*); (iii) the flask-shaped parapodial lobes of setigers 7 to 13 contain an iridescent, light blue material in mature specimens, (iv) the spines with hairy terminal filaments (Okuda, 1935, fig. 2.e) are not replaced by the knobbed, aristate type (as in *P. serpens*) in the region anterior to setiger 70 in the most complete specimen available.

DISTRIBUTION. Palau Islands.

Family CHAETOPTERIDAE

Chaetopterus variopedatus (Renier, 1804)

Chaetopterus variopedatus: Fauvel, 1927 : 77, fig. 26. a-n; 1953 : 337, fig. 175. a-n; Day, 1967 : 529, fig. 22.2. a-g.

HABITAT. Attached to *Acropora* on wharf piles; in sand at 2 m depth.

RECORDS. Yandina - 5; ML 118 - 2.

NOTE. All of the specimens are small, the largest being only 20 mm long.

DISTRIBUTION. Cosmopolitan.

Mesochaetopterus sagittarius (Claparède, 1870)

Mesochaetopterus minutus Potts, 1914 : 963, pl. 2, fig. 4, pl. 3, figs 7-8, text-figs 4-5; Fauvel, 1953 : 342, fig. 178. a; Day, 1967 : 531, fig. 22.2. h-n.

Mesochaetopterus sagittarius: Bhaud, 1969 : 325, fig. 1. a-f.

HABITAT. A wide variety of deposits from coralline mud to coarse sand, MTL to LWM; in *Halichondria* at 5 m depth.

RECORDS. Tetel Is. - 25; Komimbo Bay - 22; Matiu Is. - 1; Maraunibina Is. - 2; Graham Pt. - 1; Pigeon Is. - num.; Fintry Pt. - 8; Yandina - num.

NOTES. The type specimens measure 25 mm long with a diameter of 1 mm (Potts, 1914) but Monro (1931) records specimens from N.E. Australia that are twice this size (50 × 2 mm) with tubes up to 20 cm in length. Some of the specimens from Tetel Is. and Komimbo Bay, and all of those from Pigeon Is. and Yandina are similar in size to the type material but the remaining specimens are larger and approximate the size of the Barrier Reef specimens.

DISTRIBUTION. Mediterranean; Indo-west-Pacific to Japan.

Phyllochaetopterus elioti Crossland, 1903

Phyllochaetopterus elioti Crossland, 1903 : 172, pl. 16, figs 1-4, 7-8, pl. 17, figs 10-13; Fauvel, 1953 : 340, fig. 177. e-h; Day, 1967 : 525, fig. 22.1. f-g.

HABITAT. Abundant in silty sand, MTL to LWM; coarse sand at 4 m depth.

RECORDS. Tetel Is. - num.; Fintry Pt. - num.; ML 295 - 1.

DISTRIBUTION. South and East Africa; India.

***Phyllochaetopterus herdmani* (Hornell, 1903)**

Phyllochaetopterus herdmani: Willey, 1905; 292, pl. 5, figs 127-132; Fauvel, 1953 : 342, fig. 177. i-m; Day, 1967 : 524, fig. 22.1. a-e.

HABITAT. Silty sand at MTL.

RECORD. Tetel Is. - 1.

NOTE. The single specimen is rather damaged and in a poor state of preservation but nevertheless corresponds to the species description. It is anterior fragment of 31 setigers comprising 11 anterior, 2 middle and 18 abdominal segments. On setiger 4 there are 9 modified setae in each of the notopodia. This is a first record for the Pacific region.

DISTRIBUTION. East Africa; Ceylon.

***Phyllochaetopterus socialis* Claparède, 1870**

Phyllochaetopterus socialis: Fauvel, 1927 : 84, fig. 30. a-l; 1953 : 339, fig. 176. a-l; Day, 1967 : 525, fig. 22.1. h-r.

HABITAT. Very abundant on moderately exposed reef platforms, forming dense colonies towards LWM (see Gibbs, 1969, fig. 136); single specimens embedded in *Millepora* and the sponge *Neofolitispa dianchora* (de Laubenfels) from 5 m depth.

RECORDS. Matiu Is., Cape Esperance and Batuona Is. - numerous specimens; Maramasike Pg. - 3; Kokomtambu Is. - 1; Yandina - 1.

DISTRIBUTION. Mediterranean; Atlantic; Indo-Pacific.

***Spiochaetopterus costarum costarum* (Claparède, 1868)**

Telepsavus vitrarius Ehlers, 1908 : 114, pl. 15, figs 1-8.

Spiochaetopterus vitrarius: Day, 1967 : 528, fig. 22.1. u-v.

Spiochaetopterus costarum costarum: Gitay, 1969 : 14 (synonymy).

HABITAT. Silty sand (*Thalassia* flat) at about MTL; coarse sand at LWM.

RECORDS. Tetel Is. - 6; Komimbo Bay - 14.

NOTES. The specimens have a rounded prostomium with a pair of lateral eyes. The anterior region is composed of 9 setigers, the notopodia of setiger 4 bearing single modified setae with swollen, triangular or heart-shaped tips. On the ventral surface of setigers 7 to 9 the tissue is distinctly glandular, being brownish-black in colour on setiger 7 but whitish on setigers 8 and 9. On setiger 2 there is usually a thin line of brownish pigment across the ventrum. Up to 19 middle and 25 ab-

dominal segments have been noted in several specimens but most of the material is poorly preserved. The largest specimens measure about 25 mm in length, their tubes being up to 60 mm long and 0.5 to 1.0 mm in diameter. The latter are transparent and highly wrinkled.

Gitay (1969) has recognized three subspecies of *S. costarum* in the Pacific region, namely *pottsi*, *monroi* and *okudai*. The specimens from the Solomon Islands differ from all three in having fewer middle segments (i.e. 19 compared to 30–90, about 50 and about 67 respectively). Furthermore their small size distinguishes them from *pottsi* and the presence of eyes separates them from *monroi* and *okudai*. However these specimens appear to be identical with *T. vitrarius* Ehlers, known from the eastern Atlantic and Natal, which Gitay considers to be a synonym of *S. costarum costarum*.

DISTRIBUTION. Eastern Atlantic; Mediterranean; Indian Ocean.

Family CIRRATULIDAE

Cirriformia filigera (Delle Chiaje, 1825)

Audouinia filigera: Fauvel, 1927 : 92, fig. 32. h-m; 1953 : 331, fig. 173. h-l.

Cirriformia filigera Day, 1967 : 518, fig. 20.4. p-q.

HABITAT. In *Acropora* rubble and under coral boulders on reef platforms; in crevices and vacated borings in *Porites*, *Acropora* and beachrock.

RECORDS. Kokomtambu Is. – 1; Tetel Is. – 3; Komimbo Bay – 3; Matiu Is. – 1; Paleki Is. – 2; Lauvie Is. – 2.

DISTRIBUTION. Atlantic; Mediterranean; Indian Ocean.

Cirriformia punctata (Grube, 1859)

Audouinia semicineta: Fauvel, 1953 : 330 fig. 174. c; Okuda, 1937 : 296, fig. 41. a-c.

Cirriformia punctata: Day, 1967: 517, fig. 20.4. j-m.

HABITAT. In sedimented crevices on reef platform.

RECORDS. Komimbo Bay – 1; Batuona Is. – 54.

DISTRIBUTION. Circumtropical.

Dodecaceria fistulicola Ehlers, 1901

Dodecaceria fistulicola: Fauvel, 1953 : 335, figs 169. h-i, 174. a-b; Okuda, 1937 : 298, fig. 42. a-f.

HABITAT. Crevices in reef platform.

RECORDS. Komimbo Bay – 1; Matiu Is. – 1.

NOTES. A complete specimen has 68 segments and is about 15 mm long. There are 4 or 5 pairs of branchiae which are shorter than the palps. The first 7 or 8 setigers carry capillary setae which are replaced in later segments by 5 or 6 hooks in both rami.

DISTRIBUTION. Indo-west-Pacific; southern South America.

***Dodecaceria laddi* Hartman, 1954**

Dodecaceria laddi Hartman, 1954 : 638, figs 176. c, 177. d-h; Day, 1967 : 502, fig. 20.1. g-i.

HABITAT. Boring (?) in *Porites*.

RECORD. Kokomtambu Is. - 1.

DISTRIBUTION. Marshall Islands; South Africa.

***Tharyx* sp.**

HABITAT. Silty sand at 36 m depth.

RECORD. Off Fintry Pt. - 1.

NOTES. The specimen is incomplete with 26 segments and measures 3.5 mm long. The diameter is about 0.4 mm. The palps have been lost but scars indicate their position. The setae are entirely capillary. It is impossible to identify this fragment with any certainty but possibly it is *T. multifilis* Moore, which is known from Madras (Fauvel, 1953).

Family COSSURIDAE

***Cossura coasta* Kitamori, 1960**

Cossura coasta Kitamori, 1960 : 1082, fig. 1. a-f; Imajima & Hartman, 1964 : 299; Day, 1967 : 581, fig. 26.1. a-d.

HABITAT. Mud at 22 m depth.

RECORD. ML 37 - 2.

NOTES. Both specimens are incomplete; the larger measures 10 mm for 60 segments and has a diameter of 0.5 mm. They differ from the species description only in respect of the shorter capillary setae which, instead of being serrated, are smooth, and also taper quite abruptly about halfway along their length to a very slender filament.

DISTRIBUTION. Southern Africa; Japan.

Family **FLABELLIGERIDAE***Diplocirrus glaucus orientalis* n. subsp.

DESCRIPTION. The specimen chosen for the holotype (from ML 194) is 18 mm long for 25 segments and has a maximum diameter of about 2.0 mm in the anterior body region. A complete paratype (from ML 55) is 20 mm in length for 40 segments. The characters are those of the stem species *Diplocirrus glaucus* (Malmgren), (Fauvel, 1927 : 120, fig. 43. a-d) but is distinguished by the presence of conspicuous orange coloured, globular papillae situated on the ventral surface below each neuropodium from setiger 4 to setigers 14 or 16.

HABITAT. Mud and silty sand, 11 to 24 m depth.

RECORDS. ML 55 - 1; ML 188 - 3; ML 194 - 1 (holotype); ML 218 - 1; ML 230 - 1.

British Museum (Natural History) Registration No. Holotype 1970.70

Paratypes 1970.71-74

NOTES. The stem species is widely distributed in the North Atlantic region and, although Fauvel (1932) refers a specimen dredged in the Mergui Archipelago from 7 m (4 fm) to this species 'with great hesitation', no certain record of this species being taken in the Indian Ocean exists.

Specimens of the stem species from Plymouth do not possess conspicuous papillae below the neuropodia of the anterior segments. The presence of these papillae thus distinguishes the subspecies *orientalis*.

Family **SCALIBREGMIDAE***Hyboscolex longiseta* Schmarda, 1861

Hyboscolex longiseta Schmarda, 1861 : 54, pl. 27, fig. 211, with text-figs; Day, 1967 : 588, fig. 27.2. a-d.

HABITAT. Under coral boulders in muddy silt; in beachrock.

RECORDS. Tetel Is. - 1; Maraunibina Is. - 1; Lauvie Is. - 2.

DISTRIBUTION. Southern and East Africa; New Zealand (Auckland Is.).

Scalibregma inflatum Rathke, 1843

Scalibregma inflatum: Fauvel, 1927 : 123, fig. 44. a-f; 1953 : 355, fig. 185. a-f; Day, 1967 : 590, fig. 27.2. e-i.

HABITAT. Silty mud at 13 m depth.

RECORD. ML 69 - 1.

DISTRIBUTION. Cosmopolitan (but few records from the Indo-Pacific region).

Family **OPHELIIDAE*****Armandia lanceolata*** Willey, 1905

Armandia lanceolata Willey, 1905 : 288, pl. 5, fig. 120; Fauvel, 1953 : 358.

HABITAT. *Acropora* rubble at LWM; silt and sand, 5-24 m depth.

RECORDS. Tetel Is. - 1; ML 56 - 1; ML 117 - 1; ML 134 - 1; ML 229 - 1; ML 230 - 1.

DISTRIBUTION. Indo-west-Pacific.

Armandia leptocirrus (Grube, 1878)

Ophelina (*Armandia*) *leptocirrus* Grube, 1878 : 194.

Armandia leptocirrus: Fauvel, 1953 : 358; Day, 1967 : 577, fig. 25.2. h.

HABITAT. Silt and coralline mud at LWM; mud and sand, 2-18 m depth.

RECORDS. Komimbo Bay - 1; Matiu Is. - 7; ML 68 - 2; ML 97 - 1; ML 118 - 1; ML 190 - 2; ML 192 - 1; ML 196 - 3; ML 283 - 4.

DISTRIBUTION. Tropical Indo-west-Pacific.

Armandia longicaudata (Caullery, 1944)

Ammotrypane longicaudata Caullery, 1944 : 44, fig. 35. a-c.

Armandia longicaudata: Day, 1967 : 577, fig. 25.2. a-c.

HABITAT. Silty sand at 24 m depth.

RECORD. ML 230 - 1.

DISTRIBUTION. East Africa; East Indies.

Ophelia koloana n. sp.

(Fig. 14. A-B)

DESCRIPTION. The two type specimens measure 10 to 12 mm in length and have a diameter between 1.0-1.5 mm. The paratype is a female approaching maturity, containing coelomic oocytes.

The prostomium is sharply pointed. The anterior region is cylindrical with the ventral groove commencing at setiger 8. The first 9 setigers are abbranchiate,

branchiae being present from setiger 10 to setiger 27 (i.e. there are 18 pairs). Each branchia is rather small and has a 'crimped' appearance (fig. 14. A). The branchiiferous region is followed by 4 abbranchiate segments and then two achaetous annuli (or pre-anal segments). Thus, following the scheme of Tebble (1953), the body formula is $9a + 18b (-) + 4a + 2n = 33$. From setiger 30 to the pygidium there is a pair of prominent dorso-lateral ridges (fig. 14. B). The pygidium bears two stout ventral papillae and 9 small dorsal ones. Neither nephridiopores nor branchial fenestrations in the lateral body wall could be detected.

In terms of its affinities, *O. koloana* has a similar body formula to *O. denticulata* Verrill and *O. capensis* Kirkegaard. However in *O. denticulata*, which is an Atlantic species, the ventral groove starts at segment 10 and it has 11 to 18 dorsal anal papillae (Fauvel, 1927 : 132, fig. 46, g-h, as *O. neglecta*, *vide* Tebble, 1953). *O. capensis* from South Africa differs in that it has lateral swellings from segment 26 to the pygidium (Kirkegaard, 1959 : 45, fig. 8) not dorso-lateral ridges from setiger 29.

HABITAT. Sand at 2 m depth.

RECORDS. ML 118 - 2.

British Museum (Natural History) Registration No. Holotype 1970.75

Paratype 1970.76

NOTE. Hitherto the genus *Ophelia* appears to have been recorded only once in the tropical Indo-west-Pacific region, namely, a single specimen of *O. limacina* from Indo-China (Fauvel, 1939).

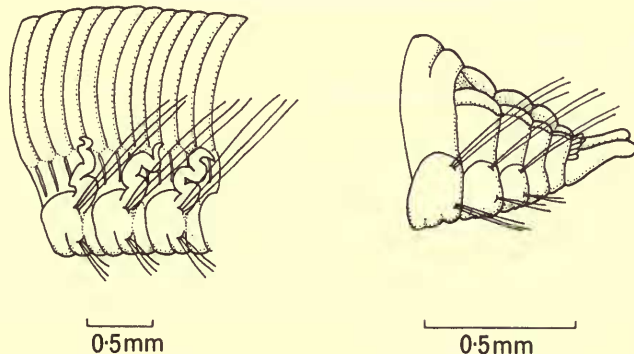


FIG. 14. *Ophelia koloana* n.sp. (A) Lateral view of segments 22 to 24.
(B) Dorso-lateral view of posterior region.

Polyophthalmus pictus (Dujardin, 1839)

Polyophthalmus pictus: Fauvel, 1927 : 137, fig. 48. 1-o; 1953 : 360, fig. 187. 1-o; Day, 1967 : 579, fig. 25.2. k-m.

HABITAT. Interstices of the sponge *Halichondria* at 5 m depth.

RECORDS. Yandina - 3.

NOTES. All three specimens appear to be juvenile in that they measure only 3 to 7 mm in length. Pillai (1965) found this species in a similar habitat, namely, within sponges and other encrusting organisms on bamboo oyster spat collectors.

DISTRIBUTION. Cosmopolitan.

Family STERNASPIDAE

Sternaspis scutata (Renier, 1807)

Sternaspis scutata: Fauvel, 1927 : 216, fig. 76. a-g; 1953 : 401, fig. 210. a-g; Day, 1967 : 648, fig. 31.1. a-d.

HABITAT. Mud and silty sand, 18-24 m depth.

RECORDS. ML 218 - 6; ML 230 - 3.

DISTRIBUTION. Cosmopolitan.

Family CAPITELLIDAE

Capitellethus dispar (Ehlers, 1907)

Capitellethus dispar: Fauvel, 1953 : 371; Rullier, 1965 : 194.

HABITAT. Silty sand above LWM.

RECORDS. Komimbo Bay - 3.

NOTES. The material is fragmentary and the largest specimen measures 18 mm long for 60 segments. The peristomium is achaetous and there are 11 thoracic setigers with capillary setae in both rami, which are replaced by hooks from setiger 12. No branchiae could be seen. In all three specimens the epidermal cells of setigers 11 and 12 (the last thoracic and first abdominal) contain a dark pigment.

DISTRIBUTION. India; West Pacific.

Capitobranchus sp.

HABITAT. Coarse sand at LWM.

RECORD. Tetel Is. - 1.

NOTES. The single specimen is incomplete, measuring 20 mm for 20 segments, and has a diameter of about 2 mm. The peristomium is biannulate, segments 2 to 4 are triannulate, segments 5 to 8 are quadriannulate and the remaining segments are

biannulate. Segments 2 and 3 are achaetous but may have lost their setae. Segments 4 to 12 have capillaries in both rami which are replaced by hooks in the neuropodia from segment 13.

In having at least 19 thoracic segments and hooks from setiger 13 (assuming segments 2 and 3 to have been setigerous), the specimen falls within the broad definition of the genus *Capitobranchus* given by Day (1962, p. 651) as follows: "Thorax with an achaetous peristome followed by about 19 setigerous segments most of which bear capillary setae in both rami, but hooded hooks are present in the last few neuropodia." The genus is monospecific based on *C. macgregori* from Madagascar which has 19 thoracic setigers, the last four of which bear neuropodial hooks. Due to its incomplete nature, the specimen from Tetel Island must remain indeterminable as to species until further material becomes available.

***Dasybranchus caducus* (Grube, 1846)**

Dasybranchus caducus: Fauvel, 1927 : 148, fig. 52. a-h; 1953, 365, fig. 190. a-h; Day, 1967 : 603, fig. 28.3. e-h.

HABITAT. A wide variety of deposits, mud to coarse sand, particularly under coral boulders on reef platforms, from above MTL to LWM; mud, 9-22 m depth.

RECORDS. Tetel Is. - 56; Nggela Is. (Sandfly Pg.) - 30; Naro Bay - 7; Komimbo Bay - 14; Matiu Is. - 16; Graham Pt. - 19; Fintry Pt. - 7; ML 29 - 2; ML 56 - 1.

DISTRIBUTION. Atlantic; Mediterranean; Indo-Pacific.

***Mastobranchus dollfusi* Fauvel, 1936**

Mastobranchus dollfusi Fauvel, 1936 : 81, fig. 11. a-g; Kirkegaard, 1959 : 51.

HABITAT. Muddy sand at MTL; mud and silty sand, 2-22 m depth.

RECORDS. Nggela Is. - 4; ML 29 - 1; ML 68 - 5; ML 195 - 1.

NOTES. Specimens have a diameter of 0.5 to 1.0 mm and the largest anterior fragment is 30 mm long for 70 segments. The prostomium is conical with a pair of pigmented eye-spots and is followed by an achaetous peristomium. The first setiger has capillary notosetae only; setigers 2 to 10 have capillaries in both rami. The number of thoracic setigers varies, as noted by both Fauvel and Kirkegaard for the West African material. In the Solomon Islands specimens setiger 11 usually has capillary notosetae and neuropodial hooks with the succeeding segments carrying hooks in both rami. However two specimens have capillary notosetae on setiger 12, one of which also has capillary neurosetae on setiger 11. A fragment of the posterior region possesses retractile branchiae situated posteriorly to the notopodia of the abdominal segments, and the pygidium has four short anal cirri.

Despite the wide geographical separation of the two localities, the Solomon Islands specimens appear to be identical to those from West Africa in all details.

DISTRIBUTION. West Africa.

Mastobranthus trinchessii Eisig, 1887

Mastobranthus trinchessii: Fauvel, 1927 : 152, fig. 54. a-i; Kirkegaard, 1959 : 52.

HABITAT. Silty sand, MTL to LWM.

RECORDS. Tetel Is. - 1; Komimbo Bay - 4; Graham Pt. - 27.

NOTES. Although *M. trinchessii* is a species hitherto known only from the Mediterranean and West Africa, the Solomon Islands specimens appear to be identical. Briefly, the latter specimens have an achaetous peristomium, followed by 11 thoracic setigers with capillary setae in both rami, except the first which has notosetae only. From setiger 12 the capillaries are replaced by hooks in the neuropodia, but in the notopodia capillaries persist with the hooks until about setiger 90. Retractable cirriiform branchiae are present in the posterior segments and the pygidium carries four anal cirri.

DISTRIBUTION. Mediterranean; West Africa.

Mediomastus sp. cf. *capensis* Day, 1961

Mediomastus capensis Day, 1961 : 518, fig. 11. a-d; 1967 : 600, fig. 28.2. n-p.

HABITAT. Mud at 18 m depth.

RECORD. ML 218 - 1.

NOTES. The specimen is an anterior fragment of 25 segments, measuring 7 mm in length. An achaetous peristomium is followed by 10 thoracic setigers, the first four of which have capillaries, the remaining six having hooks only. Although conforming to the description of the South African material, the identity of the specimen must remain provisional, due to its fragmentary condition.

Notomastus sp.

HABITAT. Sand, 2-9 m depth.

RECORDS. ML 97 - 1; ML 118 - 1.

NOTES. Both specimens are anterior fragments consisting of 11 thoracic setigers and a few abdominal segments. Setigers 1 to 4 are triannulate and setigers 5 to 11 are quadriannulate. The thoracic segments are strongly areolated, particularly the more anterior ones. The abdominal tori are well developed. A specific identification cannot be made with any certainty because of the absence of branchiferous segments.

Family ARENICOLIDAE

Abarenicola claparedii claparedii (Levinsen, 1883)

Arenicola claparedii: Fauvel, 1927 : 163, fig. 57. k-n.

Abarenicola claparedii: Wells, 1959 : 307, fig. 2.

HABITAT. Coralline silty mud at LWM.

RECORD. Matiu Is. - 1.

NOTES. The single specimen was kindly examined by Prof. G. P. Wells who identified it, from its superficial characters only, as one of the cystless species of *Abarenicola*, probably *claparedii claparedii*. This determination will have to be confirmed on the basis of its internal anatomy.

DISTRIBUTION. Mediterranean.

Family MALDANIDAE

The following descriptions of the maldanid material are based on notes provided by Dr. Charlotte Mangum.

Subfamily EUCLYMENINAE

Clymenella (= *Macroclymene*) sp. 1

HABITAT. Silty shell gravel on *Thalassia* flat.

RECORD. Graham Pt. - 1.

NOTES. The specimen is incomplete (the head and probably five anterior setigers are missing) and has 48 setigers plus a caudal funnel. The latter carries long and short cirri, which are arranged in an alternating pattern of one long, two short, one long, two short and so on, in addition to a median ventral cirrus that is 1.5 to 2.0 times the length of the long cirri. Posterior pre-anal achaetous segments are absent.

Clymenella (= *Macroclymene*) sp. 2

HABITAT. Under boulder in muddy silt at LWM.

RECORD. Komimbo Bay - 1.

NOTES. An anterior fragment composed of 27 setigers is available. It has a cephalic plaque with nuchal organs extending nine-tenths of its length. Prostomial pigment spots are absent. There are shallow clefts in the medial and posterior margins of the cephalic rim. Uncini are present on all setigers including the first three.

***Clymenella* (= *Euclymene*) sp.**

HABITAT. Silty sand with coral debris on lower shore.

RECORD. Komimbo Bay - 1.

NOTES. The specimen is complete with 19 setigers plus one or two posterior achaetous segments. A cephalic plaque is present, the rim of which has six well defined lobes along the dorsal margin. There are a few prostomial pigment spots. Setigers 1 to 3 each have a single large aciculum. A caudal funnel is present and this carries a median ventral cirrus that is more than 1.5 times the length of the other cirri. Questionably identified as *Praxillella köllikeri* (McIntosh, 1885, as *Praxilla köllikeri*).

***Praxillella* sp.**

HABITAT. Silty fine coral sand at LWM.

RECORD. Matiu Is. - 1.

NOTES. The complete specimen has 19 setigers plus two posterior achaetous segments. A cephalic plaque is developed with nuchal organs extending over nine-tenths of its length. The cephalic rim has posterior clefts only. Pigment spots on the prostomium are profuse. There are three or four uncini on setigers 1 and 2 and four on setiger 3. A caudal funnel is not present. The anal plug is just protruding and is surrounded by cirri of equal length. The specimen resembles *P. affinis* (Sars) but is probably a new species.

***Euclymeninae* sp. A**

HABITAT. Muddy sand at 9 m depth.

RECORD. ML 56 - 1.

NOTES. This specimen is an anterior fragment of nine setigers. The cephalic plaque has nuchal organs extending across three-quarters of its length. Prostomial pigment spots are absent. The first setiger is not clearly separated from the prostomium. One pair of acicula is present on setiger 1, two pairs on setiger 2 and one or two pairs on setiger 3, with uncini on the following segments.

***Euclymeninae* sp. B**

HABITAT. Between boulders in muddy silt at MTL.

RECORD. Tetel Is. - 1.

NOTES. This incomplete specimen is composed of the prostomium and eight setigers. The nuchal organs extend for nine-tenths of the length of the cephalic plaque and there are very shallow clefts around the medial and posterior margins of the cephalic rim. Pigment spots are present ventrally. Setiger 1 has one pair of acicula and setigers 2 and 3 have two pairs, the subsequent setigers having uncini.

Euclymeninae sp. C

HABITAT. Silty sand at 24 m depth.

RECORD. ML 230-1.

NOTES. The specimen is fragmentary, consisting of 15 anterior setigers. The cephalic plaque is unusual in having pigment spots within the plaque as well as on the ventral surface. The cephalic rim is very high and has posterior clefts only.

Subfamily NICOMACHINAE

? *Nicomache* sp.

HABITAT. Coarse coral sand below LWM.

RECORDS. Tetel Is. - 2.

NOTES. The material consists of two large anterior fragments with seven and eight setigers. They appear to be identical except that one specimen has only large setae on setigers 1 to 3 but the other specimen has four small setae on setiger 1, a small (left) and a large (right) seta on setiger 2 and one large seta on either side of setiger 3. The latter specimen may be abnormal due to aberrant growth or regeneration. In both specimens the first three setigers are light, the rest being grey-brown to dark in colour.

Family OWENIIDAE

Myriochele eurystoma Caullery, 1944

(Fig. 15. A)

Myriochele eurystoma Caullery, 1944 : 52, fig. 42. a-d, f.

HABITAT. Silty sand at 35 m depth.

RECORD. ML 72 - 1.

NOTES. The specimen is an anterior fragment about 15 mm long and has a diameter of 0.5 mm. It has a large mouth with a prominent buccal organ on its

ventral margin (fig. 15. A). The prostomium and anterior segments are pigmented reddish-brown, with two eye-spots situated ventro-laterally. Between the latter, running over the dorsal surface, there is a thin unpigmented band. The tube is composed chiefly of sponge spicules cemented with their long axes around the circumference of the tube, the latter having a diameter of about 1.2 mm.

The specimen is referred to *M. eurystoma* on account of its large mouth and its pigmentation. Caullery notes that a specimen from 32 m depth was pigmented but specimens from deeper waters (131–1570 m) lacked colour. The details of the posterior region are unknown.

DISTRIBUTION. East Indies.

Myriochele heruensis n. sp.

(Fig. 15. B–G)

DESCRIPTION. Of the fourteen specimens taken at ML 134, only three could be removed intact from their tubes. The holotype is 7.6 mm long for 18 segments and the two other complete paratypes measure 6.6 and 7.5 mm for 16 and 17 segments respectively. The largest specimen probably measured between 10 and 12 mm long when intact. The diameter of the worm is between 0.28 and 0.40 mm.

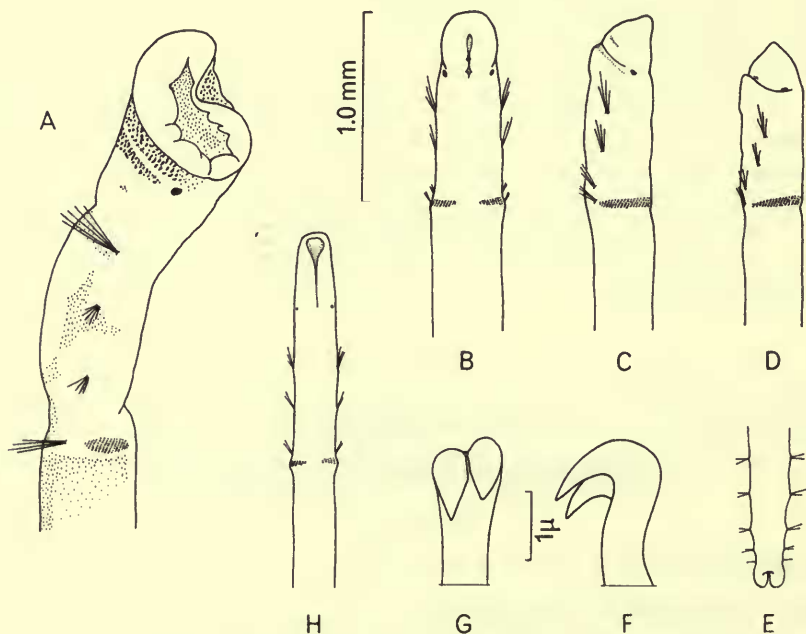


FIG. 15. *Myriochele eurystoma*. (A) Anterior region. *Myriochele heruensis* n.sp. (B–D) Ventral and lateral views of anterior region. (E) Dorsal view of posterior region. (F–G) Profile and face views of uncus. *Myriochele* sp. (H) Ventral view of anterior region.

The prostomium is short with a rounded anterior margin (fig. 15. B). In those specimens preserved with the prostomium protracted, a shallow groove can be discerned extending across the dorsal surface of the prostomium, terminating on either side at the level of ventro-lateral eye-spots (fig. 15. c). In other specimens the prostomium is contracted, and in these the dorsal groove appears as a distinct fold (fig. 15. D). This groove or fold is quite marked in all specimens and serves as the characteristic feature of the species. In addition to the two red eye-spots, two small patches of red pigment are present on the antero-dorsal surface of the prostomium and there is also a thin red line along the posterior margin of the dorsal groove.

The first three setigers are short. From setiger 4 there is a progressive increase in the length of the segments, reaching a maximum in the middle body region, and then successive segments become shorter. The pygidium has two short, stout anal cirri (fig. 15. E).

The setae are of the usual *Myriochele* types. Notosetae are slender capillaries with short lateral processes along either side of the blade. Neurosetae, present from setiger 4, are uncini, each with two subequal teeth at the apex (fig. 15. F-G). In the middle body segments, the tori are composed of 7 or 8 vertical rows of uncini.

The tube is composed of shell fragments which are cemented with their flat surfaces at right angles to the long axis of the tube. The latter has a diameter of 0.8 to 1.0 mm and a maximum length of about 25 mm.

As noted above the distinct groove across the dorsal surface of the prostomium is sufficient to distinguish *M. heruensis* from all other species. This feature may be interpreted as a feeding adaptation in that it provides a mechanism whereby the position of the mouth can be changed.

HABITAT. Sand at 16 m depth.

RECORDS. ML 134 - 14.

British Museum (Natural History) Registration No. Holotype 1970.77
Paratypes 1970.78

Myriochele sp.

(Fig. 15. H)

HABITAT. Sand at 5 m depth.

RECORD. ML 229 - 1.

NOTES. The specimen lacks posterior segments but probably measured about 12 mm long when intact. It has a diameter of 0.24 mm. The anterior margin of the prostomium is bluntly rounded and, ventrally, the mouth extends about half the prostomial length, ending at the level of two red eye-spots which are ventro-lateral in position (fig. 15. H).

The tube has a diameter of 0.4 mm and consists of sand and shell fragments cemented with their long axes along the length of the tube.

The specimen shows a general similarity to *M. minor* Caullery but differs in having eye-spots.

Owenia fusiformis Delle Chiaje, 1844

Owenia fusiformis: Fauvel, 1927 : 203, fig. 71. a-f; 1953 : 391, fig. 203. a-f; Day, 1967 : 649, fig. 31.1. e-j.

HABITAT. Medium and coarse sand, 2-18 m depth.

RECORDS. ML 96 - 3; ML 118 - 3; ML 134 - 5; ML 190 - 2; ML 192 - 13; ML 203 - 1; ML 204 - 60; ML 229 - 2; ML 283 - 1.

DISTRIBUTION. Cosmopolitan.

Family SABELLARIIDAE

Lygdamis ehlersi (Caullery, 1913)

Tetreres ehlersi Caullery, 1913 : 201, figs a-d.

Lygdamis ehlersi: Caullery, 1944 : 62, figs 49-50.

HABITAT. Silty sand at LWM.

RECORDS. Fintry Pt. - 5.

NOTES. The largest specimen is 50 mm long for 50 segments. The tube is constructed of gravel, shell and calcareous alga fragments. The chief characters include the following: on the operculum, there are 19 or 20 external and 6 or 7 internal paleae on each side and 10 groups of buccal cirri. The median cirrus (*lobe préoral*) is stout, longer than the palps, and has a truncated tip which is darkly pigmented a bluish-black colour. There are 13 to 15 pairs of branchiae.

Comparing these specimens with the type description they have fewer external (20 compared to 25) and internal (6 or 7 instead of 12) paleae but correspond in all other details.

Although Hartman (1959) indicates that *L. ehlersi* may be a synonym of *L. indicus* the two species appear to be distinct and separable on the form of the median cirrus. In *L. ehlersi* the median cirrus is stout, longer than the palps and has a truncated tip while in *L. indicus* this organ is shorter than the palps and tapers to a point.

DISTRIBUTION. East Indies.

***Lygdamis indicus* Kinberg, 1867**

Lygdamis indicus: Johansson, 1925 : 8, fig. 2. 2-7; Fauvel, 1953 : 399, fig. 209. a-k; Day, 1967 : 677, fig. 33.3. c-h.

HABITAT. Undersurface of coral boulder at LWM.

RECORD. Pirikale Is. - 1.

NOTES. The specimen is 30 mm long (diameter = 4 mm) with 48 setigers. It has 37 external and 17 internal paleae on each side. The tube is a fragile structure constructed of shell fragments.

DISTRIBUTION. Tropical Indo-west-Pacific.

Family **PECTINARIIDAE*****Pectinaria (Pectinaria) antipoda* Schmarda, 1861**

Pectinaria (Pectinaria) antipoda Schmarda, 1861 : 46, pl. 24, fig. 199, with text-figs; Pruvot, 1930 : 78, pl. 3, figs 93-95; Fauvel, 1953 : 403, fig. 211. e-g.

HABITAT. Mud and sand, 4-22 m depth.

RECORDS. ML 37 - 1; ML 203 - 1; ML 229 - 1.

NOTES. All three specimens are too small (less than 10 mm) to be certain of their identity but they appear to belong to this Indo-west-Pacific species.

DISTRIBUTION. Persian Gulf; West Pacific.

Family **AMPHARETIDAE**Subfamily **MELINNINAE*****Isolda pulchella* Müller, 1858**

Isolda sibogae Caullery, 1944 : 102, fig. 83. a-h.

Isolda pulchella: Day, 1963 : 434 (synonymy); 1967 : 691, fig. 35.1. k-n.

HABITAT. Mud and silty sand, 2-18 m depth.

RECORDS. ML 56 - 1; ML 196 - 1; ML 218 - 1.

DISTRIBUTION. Atlantic and Indian Oceans; East Indies.

Subfamily **AMPHARETINAE**? *Sosane wireni* Caullery, 1944

(Fig. 16. A-B)

Sosane wireni Caullery, 1944 : 87, fig. 69. a-e.

HABITAT. Silty sand at 24 m depth.

RECORD. ML 230 - 1.

NOTES. The specimen is 7 mm long for 26 setigers of which 15 are thoracic and 11 abdominal. It is referred to *S. wireni* on account of the branchiae being arranged with three pairs in a transverse line across setiger 1 and a smaller fourth pair on setiger 2. However there is some doubt as to the identity since Caullery omits any reference to the diagnostic features of the genus, namely, the presence of (i) a nephridial papilla on the branchial ridge and (ii) specialised notosetae on elevated posterior notopodia (Day, 1964). There does not appear to be a nephridial papilla present on the Solomon Islands specimen but the notopodia of setiger 13 are elevated (fig. 16. A) and each carries about 20 modified notosetae which have a 'penicillate' appearance (fig. 16. B).

DISTRIBUTION. East Indies.

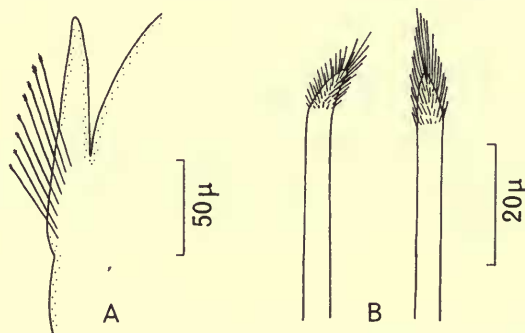


FIG. 16. ? *Sosane wireni*. (A) Elevated notopodium of setiger 13.
(B) Modified notosetae from same setiger.

Family **TEREBELLIDAE**Subfamily **TRICHOBRANCHINAE***Terebellides stroemi* Sars, 1835

Terebellides stroemi: Fauvel, 1927 : 291, fig. 100. i-q; 1953 : 436, fig. 231. i-q; Day, 1967 : 713, fig. 36.1. f-j.

HABITAT. Mud and silty sand, 2-24 m depth.

RECORDS. ML 155 - 31; ML 157 - 3; ML 196 - 1; ML 218 - 1; ML 230 - 3.

DISTRIBUTION. Cosmopolitan.

Subfamily **POLYCIRRINAE*****Amaeana trilobata*** (Sars, 1863)

Amaea trilobata: Fauvel, 1927 : 285, fig. 99. a-e.

Amaeana trilobata: Day 1967 : 718, fig. 36.3. e-h.

HABITAT. Mud, 11-22 m depth.

RECORDS. ML 29 - 1; ML 194 - 1.

DISTRIBUTION. North Atlantic; Mediterranean; southern Africa; Japan.

Lysilla ubianensis Caullery, 1944

Lysilla ubianensis Caullery, 1944 : 197, fig. 156. a-e; Day, 1967 : 721, fig. 36.3. i-j.

HABITAT. Silty mud, MTL to LWM, and at 13 m depth

RECORDS. Tetel Is. - 3; Komimbo Bay - 1; ML 69 - 1.

DISTRIBUTION. East Africa; East Indies.

Subfamily **THELEPINAE*****Euthelopus kinsemboënsis*** Augener, 1918

Euthelopus kinsemboënsis Augener, 1918 : 548, pl. 6, fig. 161, pl. 7, fig. 250, text-fig. 95; Fauvel, 1930 : 553, fig. 9. a-f; 1947 : 78, fig. 75. a'-d'; Day, 1967 : 726, fig. 36.5. e-i.

HABITAT. Under coral boulder on reef platform.

RECORD. Graham Pt. - 1.

NOTES. The specimen is an anterior fragment of 34 setigers which corresponds in detail to the specimen from New Caledonia described by Fauvel except that the branchial filaments, situated on segments 2, 3 and 4, number 10, 8 and 6 respectively, not 12, 8 and 4. The type specimen from Angola has only 12 branchial filaments instead of 24, but according to Fauvel (1930) this variation is attributable to the difference in the size of the specimens.

DISTRIBUTION. Angola; New Caledonia.

Subfamily **TEREBELLINAE*****Eupolymnia nebulosa*** (Montagu, 1818)

Polymnia nebulosa: Fauvel, 1927 : 257, fig. 89. a-g; 1953 : 419, fig. 219. a-g.

Eupolymnia nebulosa: Imajima & Hartman, 1964 : 337; Day, 1967 : 744, fig. 36.9. f-h.

HABITAT. Under coral boulder on silty sand at LWM.

RECORD. Graham Pt. - 1.

DISTRIBUTION. Atlantic; South Africa; Mediterranean; Indo-west Pacific.

Loimia medusa (Savigny, 1820)

Loimia medusa: Fauvel, 1953 : 416, fig. 218. a-f; Day, 1967 : 743, fig. 36.9. a-e.

HABITAT. A wide variety of deposits, silty mud to *Acropora* rubble, from above MTL to LWM on reef platforms; in crevices within reef platforms and amongst encrustations on wharf piles; silty sand, 9-24 m depth.

RECORDS. Tetel Is. - 3; Komimbo Bay - 9; Mamara Pt. - 1; Matiu Is. - 1; Lauvie Is. - 6; Fintry Pt. - 9; Yandina - 2; Maramasike Pg. - 1; ML 69 - 1; ML 96 - 1; ML 230 - 1.

NOTES. The largest specimens, up to 40 cm in length with over 200 segments, were found in coral debris deposits (chiefly *Acropora* fragments) on reef platforms. Their tubes were loosely constructed of *Halimeda*, coral and shell fragments and extended to a depth of over 30 cm. Although conspicuous on account of their white feeding tentacles spread over the surface, specimens are difficult to capture in this habitat because of their ability to rapidly withdraw to the bottom of their deep tubes when disturbed. However smaller specimens which are commonly found under coral boulders lying in silty mud are easily taken.

DISTRIBUTION. Cosmopolitan in temperate and tropical waters.

Pista dibranchis n. sp.

(Fig. 17. A-E)

DESCRIPTION. A specimen from Tetel Island has been selected for the holotype. It is incomplete and measures 12 mm for 32 segments. The largest of the paratypes is 40 mm long for 130 segments. The body diameter is about 1.0 mm.

The tentacular lobe bears numerous tentacles and is without eye-spots. Semi-circular lateral lobes are present on segments 2 and 3. A pair of stalked branchiae arises from the anterior margin of the second segment and each has numerous filaments arranged spirally, with a maximum of 6 or 7 whorls, around the central stalk (fig. 17. A); often one of the pair is much larger than the other. In larger specimens the nephridial papillae on segments 6 and 7 (setigers 3 and 4) are conspicuous.

Notosetae commence on segment 4 and extend to segment 20 (setiger 17). Each bundle consists of broad-winged, smooth-tipped capillaries of two types, namely, a longer stout-shafted form (fig. 17. B) and a shorter, slender form with a recurved tip (fig. 17. C). There are usually about 11 of each type in a bundle. Uncini start on segment 5 (setiger 2) and are arranged in single rows on the anterior segments, becoming alternate in the posterior thorax. Uncini are of similar form throughout the thorax and each has 5 to 7 teeth surmounted by 15 to 20 smaller teeth above the main fang (fig. 17. D, E). The dental formula is thus: MF : 5-7 : 15-20. The uncini lack basal prolongations or shafts, even in the first row. Abdominal uncini are borne on short, square pinnules.

The tube is composed of sand grains cemented together with mud particles.

At first it was assumed that these specimens possessing only one pair of branchiae were *P. typha* juveniles in which the second pair of branchiae was either undeveloped or had been lost. However subsequent examination revealed that the uncini of the anterior segments lacked the basal shafts found in *P. typha*, and also some of the specimens contain coelomic oocytes, apparently approaching a mature condition.

In having only one pair of branchiae, *P. dibranchis* resembles *P. vinogradovi* Uschakov but lacks the transverse dorsal membrane between the branchial stalks that is present in the latter species. According to Uschakov (1955), *P. cristata* (Müller) may also have one pair of branchiae but this species differs in possessing shafted uncini. In terms of the structure of the branchial apparatus, *P. dibranchis* is intermediate between *P. unibranchia* Day, which has a single branchia, and *P. typha* Grube, which has two pairs, all three species having branchiae with spirally arranged, or whorled, filaments.

HABITAT. A wide variety of deposits, silty mud to coarse sand and shell gravel, from MTL to 24 m depth.

RECORDS. Haroro - 1; Tetel Is. - 4 (including holotype); Graham Pt. - 1; Fintry Pt. - 3; ML 38 - 1; ML 204 - 1; ML 230 - 1; ML 283 - 6; ML 296 - 1.

British Museum (Natural History) Registration No. Holotype 1970.79

Paratypes 1970.80-89

NOTE. The habitat of *P. dibranchis* overlaps that of *P. typha*; on Tetel Island the two species were taken from the same silty mud deposit on the reef platform at about MTL.

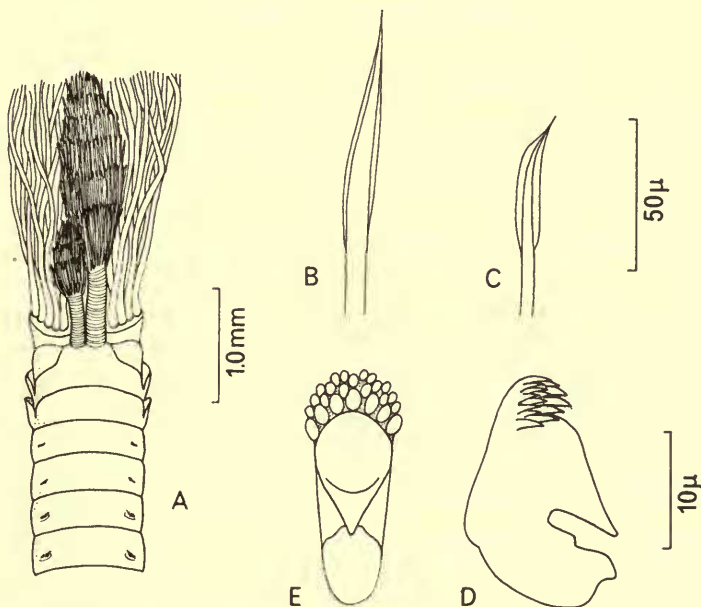


FIG. 17. *Pista dibranchis* n.sp. (A) Dorsal view of anterior region. (B-C) Thoracic notosetae. (D-E) Profile and face views of uncinus.

***Pista typha* (Grube, 1878)**

Terebella (Pista) typha Grube, 1878 : 232, pl. 12, fig. 4.

Pista typha: Fauvel, 1953 : 424, fig. 222. a-c.

HABITAT. Silty sand and mud, MTL to LWM.

RECORDS. Tetel Is. - 23; Fintry Pt. - 1.

DISTRIBUTION. Indo-west-Pacific.

***Reteterebella queenslandia* Hartman, 1963**

Reteterebella queenslandia Hartman, 1963 : 355, figs 1-3.

HABITAT. *Acropora* rubble at LWM.

RECORDS. Tetel Is. - 1; Maraunibina Is. - 1.

NOTES. The genus *Reteterebella* Hartman differs from the closely allied genus *Eupolymnia* Verrill in lacking notosetae on segment 4, thus having 16 instead of 17 thoracic setigers, and also in the first appearance of the double rows of uncini on the sixth (segment 10 or setiger 6), not the seventh uncinigerous segment (= setiger 8 in *Eupolymnia*).

DISTRIBUTION. North-east Australia (Queensland).

***Terebella ehrenbergi* Grube, 1870**

Terebella ehrenbergi: Fauvel, 1953 : 421, fig. 220. a-c; Day, 1967 : 748, fig. 36.10. g-i.

HABITAT. Crevices in reef platform.

RECORDS. Matiu Is. - 2.

DISTRIBUTION. Tropical Indo-west-Pacific.

Family SABELLIDAE***Branchiomma cingulata* (Grube, 1870)**

Dasychone cingulata: Willey, 1905 : 308, pl. 7, figs 170-173; Fauvel, 1953 : 442, fig. 234. f-h.

Branchiomma cingulata: Johansson, 1927 : 161, text-fig. 14.1-2; Imajima & Hartman, 1964 : 355.

HABITAT. Embedded in *Acropora* at LWM.

RECORD. Tetel Is. - 1.

NOTES. The specimen is small, about 7 mm long. It has six radioles on each side of the branchial crown and the thoracic region consists of five segments.

Specimens from Ceylon and Japan have a greater number of radioles and eight thoracic segments but are larger-sized, which may account for these differences.

DISTRIBUTION. Indo-Pacific.

***Hypsicomus phaeotaenia* (Schmarda, 1861)**

Hypsicomus phaeotaenia: Fauvel, 1953 : 447, fig. 236. a-l; Day, 1967 : 761, fig. 37.2. i-n.

HABITAT. Embedded (boring?) in coral, especially *Porites*, and in beachrock.

RECORDS. Kokomtambu Is. - 1; Tetel Is. - 4; Komimbo Bay - 3; Mamara Pt. - 1; Matiu Is. - 5; Paleki Is. - 1; Lauvie Is. - 7; Graham Pt. - 3.

DISTRIBUTION. Western Africa; Mediterranean; Indo-west-Pacific.

***Megalomma intermedium* (Beddard, 1888)**

Branchiomma intermedium Beddard, 1888 : 261, pl. 21, figs 4-7; Fauvel, 1953 : 444, fig. 234. e.

Megalomma intermedium: Pillai, 1965 : 164.

HABITAT. Embedded in *Porites* boulder towards LWM.

RECORD. Tetel Is. - 1.

DISTRIBUTION. Mergui Archipelago; Philippine Islands.

***Megalomma linaresi* (Rioja, 1918)**

Branchiomma linaresi: Fauvel, 1927 : 317, fig. 110. a-l.

HABITAT. Embedded in *Acropora* at LWM and at 5 m depth.

RECORDS. Tetel Is. - 1; Yandina - 1.

NOTES. The larger specimen is 45 mm long, including the branchial crown which has a length of 10 mm. There are 16 to 19 radioles on each side. The dorsal radioles carry the largest subterminal eyes, which gradually diminish in size on the lateral radioles and are absent from the ventral ones. The collar gapes widely on the dorsal side: it has lateral notches and large ventral lobes. There are 8 thoracic segments, the notosetae of which consist of narrow-winged capillaries and sub-spatulate setae.

M. linaresi is known from northern Spain and the Mediterranean. Despite the absence of records from the Indian Ocean, the specimens from the Solomon Islands appear to be identical.

DISTRIBUTION. North Atlantic (Spain); Mediterranean.

Megalomma quadrioculatum (Willey, 1905)

Branchiomma quadrioculatum Willey, 1905 : 307, pl. 7, figs 168-169.

Megalomma quadrioculatum: Day, 1967 : 758, fig. 37.1. h-o.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes on reef platform towards LWM; amongst serpulid tubes on undersurface of coral boulder.

RECORDS. Cape Esperance - 36; Komimbo Bay - 1.

NOTES. The specimens were removed from sandy tubes constructed amongst the sponges and other encrusting organisms around the bases of the chaetopterid tubes. The larger specimens measure 13 to 14 mm long. The thorax consists of 6 or 7 segments with notosetae of two types, namely narrow-winged capillaries and paleae. There are 6 to 9 radioles on each side of the branchial crown and, in most specimens, only the two dorsal radioles carry subterminal eyes. However, a few specimens have smaller eyes on one or two radioles besides the dorsal radioles.

The type specimen from Ceylon (23.5 mm in length) is almost twice the size of the Solomon Islands specimens and has 14 radioles per branchial lobe with subterminal eyes on the four dorsal radioles. It would seem therefore that the second (and occasionally a third) pair of eyes develops at a later stage and, until acquired, *M. quadrioculatum* bears a superficial resemblance to *M. bioculatum* (Ehlers) from which it can be distinguished by the presence of paleae in the notopodia.

DISTRIBUTION. Indian Ocean.

Megalomma trioculatum Reish, 1968

Megalomma trioculatum Reish, 1968 : 226, fig. 5. 1-10.

HABITAT. Sand, 2-9 m depth.

RECORDS. ML 96 - 1; ML 296 - 1.

NOTES. The two specimens measure 15 to 16 mm long, the branchial crown being 2.0 to 2.5 mm in length. Both have 6 thoracic setigers (instead of 8 or 9) and the collar gapes widely on the dorsal side of the first setiger instead of extending to the mid-segmental line. Otherwise they agree closely with type description.

At the bases of the two dorsal radioles, there are longitudinal streaks of an orange-brown pigment and the radioles are banded a similar colour. The subterminal eyes are brown or mauve. The tube is a fragile structure coated with sand grains.

DISTRIBUTION. Marshall Islands.

Megalomma vesiculosum (Montagu, 1815)

Branchiomma vesiculosum: Fauvel, 1927 : 315, fig. 109. a-q.

Megalomma vesiculosum: Day, 1967 : 758, fig. 37.1. p-u.

HABITAT. Muddy sand between MTL and LWM.

RECORDS. Tetel Is. - 20.

NOTES. The subterminal eyes are entire, not divided as in *M. pacificum* Johansson although the latter may be a synonym of *M. vesiculosum*, according to Mesnil & Fauvel (1939).

DISTRIBUTION. Atlantic Ocean; Mediterranean; Indian Ocean.

Potamilla ehlersi Gravier, 1906

Potamilla ehlersi Gravier, 1906a : 37; 1908 : 87, pl. 6, fig. 260-264; Fauvel, 1953 : 449, fig. 238. g-i.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes on reef platform towards LWM.

RECORD. Cape Esperance - 1.

NOTES. The specimen is 13 mm long (branchial crown = 3 mm). There are nine radioles on each branchial lobe; the dorsal ones are without eyes but these are present on the next 4 or 5 radioles. There are 11 segments in the thorax, the anterior half of which is coloured chocolate-brown on the dorsal side. The tube is membranous, covered with sand grains, and, before dissection, its aperture was rolled, as found in *P. reniformis* (Müller) (cf. Fauvel, 1927, fig. 107 l).

DISTRIBUTION. Tropical Indo-west-Pacific.

Sabella fusca Grube, 1870

Sabella fusca: Fauvel, 1927 : 302, fig. 104. a-f; Day, 1967 : 764, fig. 37.2. t-v.

HABITAT. Beachrock.

RECORDS. Lauvie Is. - 3.

DISTRIBUTION. Mediterranean; tropical Indo-west-Pacific.

Sabella melanostigma Schmarda, 1861

Sabella melanostigma Schmarda, 1861 : 36, pl. 22, fig. 190, with text-figs; Fauvel, 1953 : 439, fig. 232. h-n.

HABITAT. Mud and silty sand, 24-33 m depth.

RECORDS. ML 100 - 1; ML 230 - 5.

NOTES. The specimens are only about 12 mm long and were extracted from narrow tubes (0.65 mm diameter) composed of mud particles. They are referred to

this species because they possess the peculiar 'shovel-like' pick-axe setae. However pigment spots above the parapodia are lacking. There are 7 radioles, each with 2 or 3 pairs of eye-spots, on either branchial lobe. The ventral lobes of the collar are large and there is a wide gap between the dorsal lobes.

DISTRIBUTION. Circumtropical.

***Sabellastarte sanctijosephi* (Gravier, 1906)**

Eurato sancti-josephi Gravier, 1906a : 42; 1908 : 105, pl. 7, figs 281-283, pl. 8, figs 284-285.

Sabellastarte indica: Fauvel, 1953 : 445, fig. 235. a-h.

Sabellastarte sanctijosephi: Day, 1967 : 771, fig. 37.5. f-i.

HABITAT. In crevices in *Porites* boulders at LWM (Gibbs, 1969, fig. 137).

RECORDS. Tetel Is. - 1; Paleki Is. - 5.

DISTRIBUTION. Western Africa; tropical Indo-west-Pacific.

Family SERPULIDAE

Subfamily SERPULINAE

***Hydroides minax* (Grube, 1878)**

Serpula minax Grube, 1878 : 269, pl. 15, fig. 5.

Hydroides minax: Fauvel, 1953 : 460, fig. 241. f; Pillai, 1960 : 8, text-fig. 3. a-e.

HABITAT. Amongst *Phyllochaetopterus socialis* tubes at LWM.

RECORDS. Matiu Is. - 2.

NOTES. These specimens were referred to *H. monoceros* Gravier, a closely allied species, in an earlier paper (Gibbs, 1969).

DISTRIBUTION. Ceylon; Philippine Islands.

***Hydroides uncinata* (Philippi, 1844)**

Hydroides uncinata: Fauvel, 1927 : 357, fig. 122. a-h; Day, 1967 : 805, fig. 38.4. h-i.

HABITAT. On *Acropora* at 5 m depth.

RECORD. Yandina - 1.

DISTRIBUTION. Atlantic Ocean; Mediterranean; East Africa; Japan.

Mercierella enigmatica Fauvel, 1923

Mercierella enigmatica: Fauvel, 1927 : 360, fig. 123. a-o; Day, 1967 : 812, fig. 38.5. o-s.

Neopomatus uschakovi Pillai, 1960 : 28, pl. 1, figs 1-2; text-figs 10. h, 11. a-h, 12. a-h; Straughan, 1966 : 139 (synonymy).

HABITAT. Brackish water – on stones and in sponge.

RECORDS. Komimbo Bay (freshwater creek) – num.; mouth of Lunga River at Lunga Pt. – 28.

NOTES. In a study of the brackish water serpulids along the east coast of Australia, Straughan (1966) discovered that there is a continuous cline in the characters used to separate the two genera *Mercierella* Fauvel and *Neopomatus* Pillai. The *Mercierella* form is characteristic of the southern populations around Sydney and the warm water *Neopomatus* form is typical for the Queensland populations.

The material from Guadalcanal is typical *Neopomatus* in that there are one or two rows of outwardly directed spines on the operculum, the collar and thoracic membranes are fused dorsally for up to three-quarters of the length of the thorax, and the collar setae have modified proximal teeth.

DISTRIBUTION. Cosmopolitan in estuarine water.

Serpula hartmanae Reish, 1968

Serpula hartmanae Reish, 1968 : 228, fig. 5. 11-16.

HABITAT. Attached to coral on reef platform.

RECORDS. Mamara Pt. – 1; Komimbo Bay – 3.

DISTRIBUTION. Marshall Islands.

Serpula vermicularis Linnaeus, 1767

Serpula vermicularis: Fauvel, 1927 : 351, fig. 120. a-q; 1953 : 454, fig. 239. a-q; Dew, 1959 : 22, fig. 3. a-h; Day, 1967 : 809, fig. 38.5. a-h.

HABITAT. Attached to coral boulders on reef platform.

RECORDS. Tetel Is. – 2; Komimbo Bay – 5.

DISTRIBUTION. Cosmopolitan.

Spirobranchus giganteus (Pallas, 1766)

Spirobranchus giganteus: Fauvel, 1953 : 462, fig. 242. a-g; Day, 1967 : 803, fig. 38.3. h-k.

HABITAT. Embedded in living *Porites* boulders (Gibbs, 1969, fig. 138) and encrusting on reef platform.

RECORDS. Kokomtambu Is. - 2; Tetel Is. - v. num.; Komimbo Bay - num.; Mamara Pt. - 1; Matiu Is. - 9; Paleki Is. - v. num.; Sifola - 1; Graham Pt. - num.

NOTES. This species is common in moderately sheltered conditions and the largest specimens, over 110 mm in length and 10 mm in diameter, were extracted from living *Porites* at Paleki Island. In comparison, encrusting forms on dead coral are much smaller in size.

DISTRIBUTION. West Indies; Indo-west-Pacific.

Spirobranchus coutierei (Gravier, 1908)

Pomatoceroopsis coutierei Gravier, 1908 : 125, pl. 8, figs 294-299, text-figs 482-487.

HABITAT. Embedded in *Porites* towards LWM.

RECORDS. Tetel Is. - 3.

NOTES. Following Straughan's (1967) key to the Indo-west-Pacific species, this identification is based on the following two characters - (i) the operculum has three processes which are deeply divided so as to give six distinct horns, and (ii) the interbranchial membrane is fimbriated.

DISTRIBUTION. East Africa; northern Australia (Straughan, 1967a).

Vermiliopsis glandigerus Gravier, 1908

Vermiliopsis glandigerus Gravier, 1908 : 121, pl. 8, figs 290-291, text-figs 476-481; Fauvel, 1953 : 467, fig. 242. k; Day, 1967 : 813, fig. 38.6. g-i.

HABITAT. Encrusting on reef platform.

RECORD. Matiu Is. - 1.

DISTRIBUTION. Western and southern Africa; Indo-west-Pacific.

Subfamily FILOGRANINAE

Filograna implexa Berkeley, 1835

Salmacina dysteri: Fauvel, 1927 : 377, fig. 129. c-k; 1953 : 476, fig. 250. c-k; Dew, 1959 : 50, fig. 19. a-g.

Filograna implexa: Fauvel, 1927 : 376, fig. 129. a-b; Day, 1955 : 450 (synonymy); 1967 : 817, fig. 38.7. a-h.

HABITAT. Encrusting on an oyster shell attached to wharf pile.

RECORDS. Yandina - num.

NOTE. No individual with an operculum developed at the end of a branchial filament was noted amongst the colony; the specimens thus correspond to the *Salmacina* form.

DISTRIBUTION. Cosmopolitan.

ADDENDUM

Recently Professor J. E. Morton forwarded a small collection of polychaetes which he collected in the Solomon Islands during the 1965 Expedition. This material includes specimens of a further two species, bringing the total number of recorded species to 222.

The species are the following:

Family NEREIDAE

Perinereis neocaledonica Pruvot, 1930

Perinereis neocaledonica Pruvot, 1930 : 50, pl. 3, figs 77-79, text-fig. 4. a-c; Fauvel, 1932 : 107; 1953 : 211, fig. 108. c-g; Tampi & Rangarajan, 1964 : 106.

RECORDS. Batuona Is - 10.

DISTRIBUTION. Tropical Indo-west-Pacific.

Family GLYCERIDAE

Glycera subaenea Grube, 1878

Glycera subaenea Grube, 1878 : 184, pl. 8, fig. 8; Fauvel, 1919a : 425, pl. 16, figs 48-51; Hartman & Imajima, 1964 : 164; Day, 1967 : 363, fig. 16.3. k-n.

RECORDS. Komimbo Bay - 3.

DISTRIBUTION. Indo-west-Pacific.

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